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THE LUMBERMAN

Since 1889

April, 1953

Vol. 80 No. 5

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A Miller Freeman Publication

POWER COSTS *Slashed* BY THIS CATERPILLAR PAIR!

Let's get right down to facts. Roy D. Cameron put this Caterpillar D337 Engine in his sawmill, located near Maupin, Oregon, for this reason: the Cat* D318 (in the background) was making a competitive unit look like a bush leaguer. The two Cats now run the entire mill—the D337 powering the head rig saw and the D318 driving the edger and sawdust conveyor.

How's the move paying off? Here are some more facts. Production of Douglas fir averages 25,000 bd. ft. per 8-hour day. The replaced power unit used 120 gallons of gasoline per day. Between them, the two Caterpillar units use only 50 gallons of non-premium Diesel fuel per day. When you figure the mill's in operation 24 days a month, 9 months a year, that's a whale of a saving.

There are many other advantages in standardizing on Caterpillar Diesels. They provide steady power for smooth cuts. They burn low-cost No. 2 furnace oil without fouling. Long life is engineered into them. And your Caterpillar Dealer backs them with genuine parts and on-the-spot service.

These money-saving engines and electric sets, in 12 sizes, are available up to 500 HP and 315 KW. Leading manufacturers can supply them in the machines they build. Ask your dealer to *show* you how they can cut costs for you!

Caterpillar Tractor Co., San Leandro, Calif.; Peoria, Ill.

CATERPILLAR*

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**NAME THE DATE...
YOUR DEALER
WILL DEMONSTRATE**

What kind of tires can your jobs afford ?

THE kind that are specifically designed for your types of jobs and equipment. The kind that only great practical experience can build. The kind that are built *sparing nothing* to bring you the greatest traction, the most rugged durability, the longest wear.

In short, the kind of tires that will keep your jobs rolling regardless—and save you time and money!

No truly cost-wise operator can afford a lesser tire—and that's why more tons, the world over, are hauled on Goodyears than on any other make!

It stands to reason that Goodyear, who has built more tires for more purposes than anyone else on earth—who has a vast practical experience matched by none, can help cut *your* operating costs, too!

Goodyear, Truck Tire Dept., Akron 16, Ohio.

FOR EACH JOB, THERE'S A COST-CUTTING GOODYEAR TIRE!

HARD ROCK LUG
For traction and toughness on tire-killing work.
HARD ROCK RIB
Front-wheel workmate to the Hard Rock Lug.
ROAD LUG
Best on-and-off roader. Runs smoother, cooler on highway — takes the rap in the rough!

Road Lug—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

GOODYEAR

We think you'll like "THE GREATEST STORY EVER TOLD" — every Sunday — ABC Radio Network — THE GOODYEAR TELEVISION PLAYHOUSE — every other Sunday — NBC TV Network

THE LUMBERMAN

Since 1889

The Production Journal of the Forest Products Industries Since 1889

APRIL, 1953 VOLUME 80, NUMBER 5

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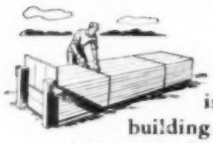
"PROTECTED LUMBER"

strapped and wrapped wins praise!



The way Genesee Lumber & Coal Co., Batavia, N. Y., "protects lumber" is winning praise from customers . . . building profits.

The method is simple. Any yard crew can do it. Lumber is sorted by lengths, and bundled into compact units by applying *Signode Steel Strapping*. Each unit is then wrapped in heavy, water-resisting kraft paper.

Everybody benefits

Bundled and wrapped lumber can be stored outside. Genesee saves time and manpower, cost of warehousing, taxes, insurance, repairs, depreciation and interest on investment. Lumber is protected from weather and pilferage on the job site.

Write for Details

For full information about strapping and wrapping lumber, write Signode Steel Strapping Co., 2636 N. Western Ave., Chicago 47, Ill. Offices coast to coast.
In Canada: Canadian Steel Strapping Co., Ltd.
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STEEL SIGNODE STRAPPING

ANOTHER TESTED AND APPROVED SIGNODE APPLICATION

STANDARD ENGINEER'S REPORT

DATA

LUBRICANT Heavy Duty RPM Motor Oil

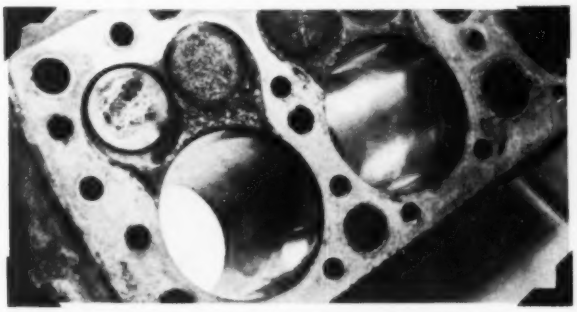
UNIT V-8 gasoline engine

CONDITIONS Heavy load, constant operation

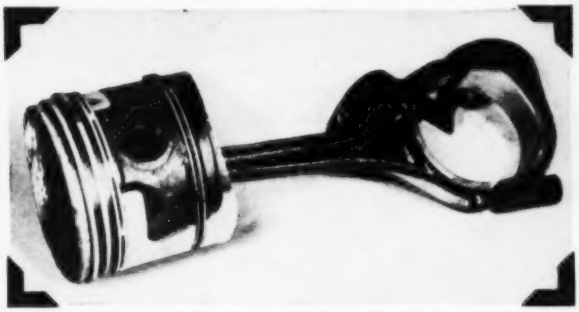
PERIOD 15 months

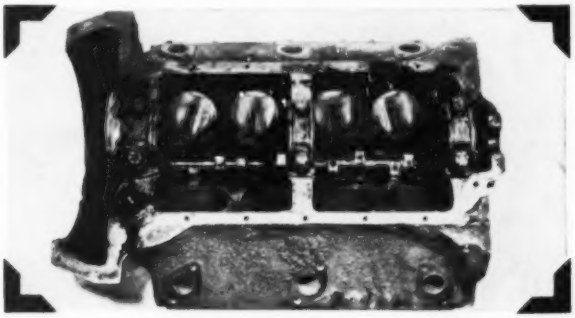
FIRM Timber Products Co., Medford, Oregon

Heavy duty motor oil cuts engine wear 73%!



LUBRICATED WITH HEAVY DUTY RPM MOTOR OIL, this engine showed only 0.00845 inch cylinder wear after 131,625 miles of tough work. Three similar engines used in the same vehicle, but lubricated with another oil, showed from 0.016 to 0.020 inch cylinder wear after only 75,000 miles! Heavy Duty "RPM" cut engine wear 73%! In this engine, rings were free, oil holes were open and there were no deposits in ring grooves as shown in this unretouched photo of a representative piston.





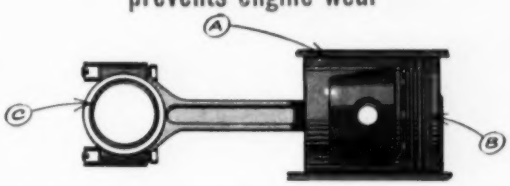
THE ENTIRE ENGINE WAS EXCEPTIONALLY CLEAN for such long service. Note particularly the lack of sludge around the camshaft. The valve springs were all visible with only minor deposits around them. Heads were clean. Con-rod bearings and main bearings showed no pitting and were worn only 0.002 inch.

REMARKS: Heavy Duty RPM Motor Oil was developed through atomic research to prevent extra wear. It keeps engines clean of carbon and lacquer, resists the formation of deposits, prevents corrosion, and stops foaming in the oil systems. Comes in several grades.

HEAVY DUTY RPM MOTOR OIL

TRADEMARK "RPM" REG. U.S. PAT. OFF.

How Heavy Duty RPM Motor Oil prevents engine wear



A. Contains special compounds that keep lubricant on metal whether hot or cold —reduce starting and running wear and rusting when idle.

B. Detergent makes carbon and soot contaminants harmless—keeps rings free, engine clean.

C. Resists oxidation and corrosion, stops foaming.

STANDARD TECHNICAL SERVICE checked this product performance. For expert help on lubrication or fuel problems, call your Standard Fuel and Lubricant Engineer or Representative; or write Standard Oil Company of California, 225 Bush St., San Francisco.

STANDARD OIL COMPANY OF CALIFORNIA

IT'S JUST THAT SIMPLE. There's only one reason in the world why 2 out of 3 loggers prefer Roebling arch lines and chokers... *they cost a lot less on the job than any others.*

For maximum wire rope efficiency and economy, call your nearest Roebling office for a Field Man. He'll recommend the best ropes for your operations.

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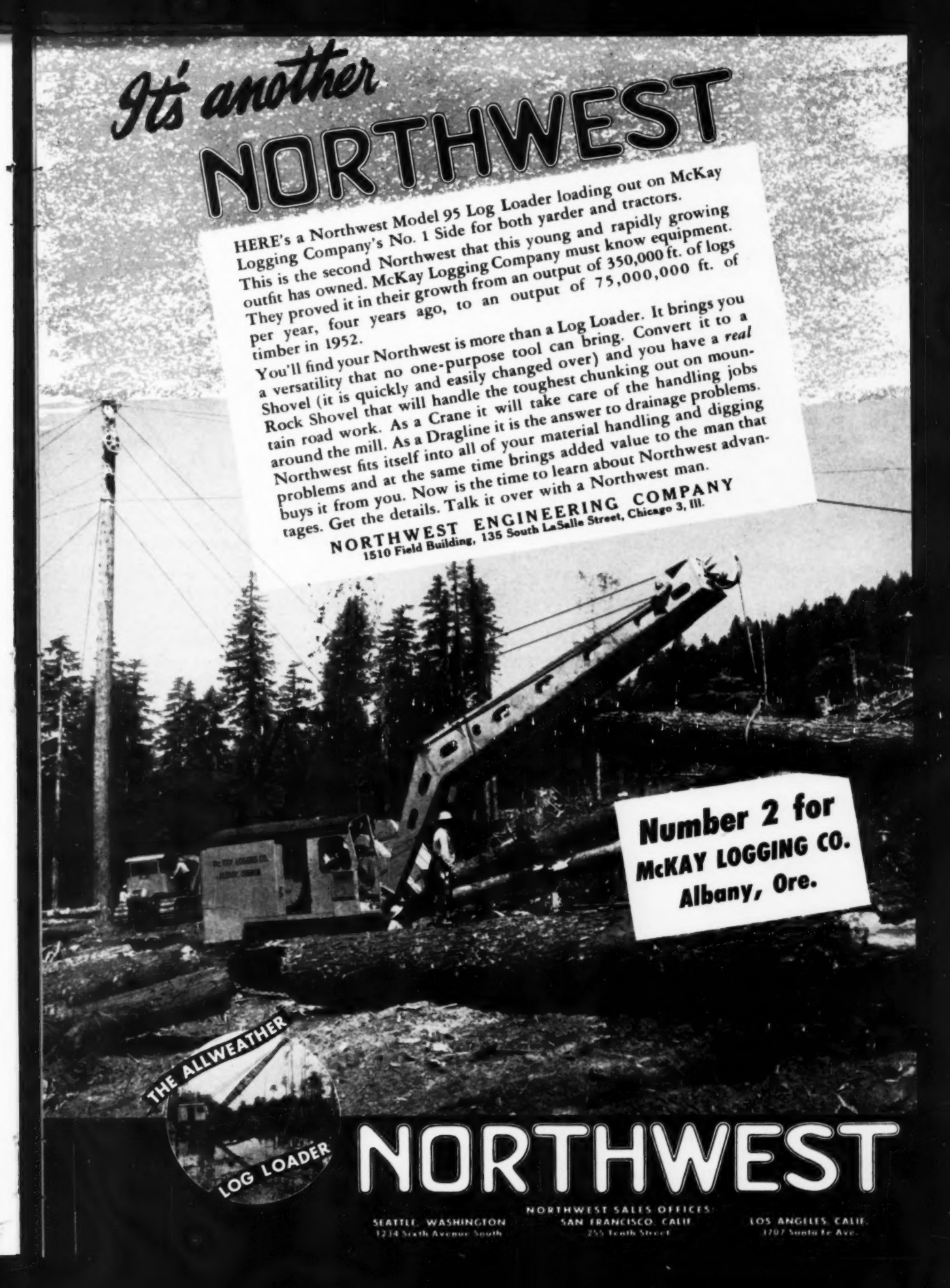
It's another
NORTHWEST
HERE's a Northwest Model 95 Log Loader loading out on McKay Logging Company's No. 1 Side for both yarder and tractors. This is the second Northwest that this young and rapidly growing outfit has owned. McKay Logging Company must know equipment. They proved it in their growth from an output of 350,000 ft. of logs per year, four years ago, to an output of 75,000,000 ft. of timber in 1952.
You'll find your Northwest is more than a Log Loader. It brings you a versatility that no one-purpose tool can bring. Convert it to a Shovel (it is quickly and easily changed over) and you have a *real* Rock Shovel that will handle the toughest chunking out on mountain road work. As a Crane it will take care of the handling jobs around the mill. As a Dragline it is the answer to drainage problems. Northwest fits itself into all of your material handling and digging problems and at the same time brings added value to the man that buys it from you. Now is the time to learn about Northwest advantages. Get the details. Talk it over with a Northwest man.
NORTHWEST ENGINEERING COMPANY
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Number 2 for
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Albany, Ore.
THE ALLWEATHER
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"POWER TO HANDLE ROCKS AND TREES AND STEEP GRADES," is what operator Clarence Watters says about the TD-24. In this photo Watters shows what he means as he pioneers a skid road through 100-foot pole timber.

"Never had to back out yet"

—says TD-24 operator Clarence Watters making skid roads through mountain timber near Glacier Park for J. Neils Lumber Co.

International TD-24s push up mountain sides as steep as 55 per cent around Libby, Montana, where the J. Neils Lumber Co. is logging 100-foot virgin larch for power line poles and lumber.

Foreman Carl Rawlings says the TD-24 will go anywhere, and Operator Clarence Watters tells why:

"The TD-24 is the best crawler I ever drove. Whatever we run up against, it has the power and weight to handle rocks, trees and steep grades. I can take it anywhere the boss can blaze. We've never had to back out yet."

Bob Neils, in charge of Libby operations for J. Neils, likes the way TD-24 performance looks on the company books. He puts it this way:

"With TD-24s we've definitely been getting more work per day. They are much steadier and have more endurance than the equipment they replaced. We are working about 35 crawler tractors. Our present policy is to replace them as they wear out with International TD-24s."

And that's the word from men who know. Call in your International Industrial Distributor for the full story. Check his complete service facilities and parts stock. You'll be a TD-24 man from then on in!

INTERNATIONAL HARVESTER COMPANY, CHICAGO 1, ILLINOIS

"JUST FOLLOW THE BLAZE MARKS," foreman Carl Rawlings tells TD-24 operator Kenneth Spencer who's ready to shove off with his big red diesel and blast a skid road through the tall timber.

SKID ROAD IN THE MAKING. Operator Kenneth Spencer aboard his Big Red TD-24, churns up rocks, roots and trees leaving smooth road behind.

INTERNATIONAL

INTERNATIONAL HARVESTER

POWER THAT PAYS

THE
LUMBERMAN'S

FOREST INDUSTRIES NEWS

J. Forrest Cobb, president of the Moore Dry Kiln Co. of Canada, died March 18 in Portland, Ore. Mr. Cobb's company is affiliated with the Moore Dry Kiln Co. in the U.S. At the time of his death, Mr. Cobb was also president of the Vancouver (Wash.) Iron & Steel Foundry Co. Cobb invented and patented several designs for kiln drying of lumber and veneer. Cobb was active in many civic organizations.

B. Frank Heintzleman, for years regional forester of Alaska and who in March was appointed governor of Alaska passed through Seattle recently on his way home to Alaska from Washington, D.C. He told THE LUMBERMAN that he sees a bright future of Alaska's forest industry. Mr. Heintzleman's appointment as governor will make it necessary for a new regional forester to be named. Chas. Burdick, assistant regional forester of Alaska, is due for retirement this summer, so there likely will be several new faces in Region 20.

Edward P. Stamm, logging manager of Crown Zellerbach Corp., since 1935 has been promoted to vice-president of the corporation. He will maintain his headquarters in Portland, Ore., and will have active charge of timber logging, and forestry in the company's United States properties. He has been with the company for 27 years.

A lifelong logger who started work in the woods at the age of 13 and saw the logging industry progress through the river driving, railroad and truck and tractor eras has been appointed as assistant to E. G. Griggs II, president of St. Paul & Tacoma Lumber Co. He is Frank Hobi, formerly vice president and director of the Harbor Plywood Corp. From 1919 to 1928, he was president of the Hobi Logging Co. and of Hobi Timber Co. from 1929 to 1942 he was president and manager of the North River Logging Co. and secretary of the Lindberg and Hobi Co. At Harbor Plywood, he was in charge of timber and logging operations.

Crown-Zellerbach Corp., in late February planted its two millionth tree in Clatsop County, Ore. since World War II. Crown-Zellerbach has planted or seeded 28,000 acres. The company has planted some 6,000,000 trees in all its Washington and Oregon holdings. The company will soon have completed its planting program on cut-over lands and will thereafter be able to confine its replanting or seeding efforts to lands being currently harvested.

J. A. McMillan, formerly sales manager of the Alberni Pacific division, MacMillan Bloedel, Ltd., at Port Alberni, has been named sales manager for the company's western district sawmills. This includes the former Bloedel mills in the Alberni district. Jack McMillan is considered the dean of British Columbia sawmill sales managers.

George H. Clarke, former superintendent of Alberni Pacific division, MacMillan & Bloedel, has been promoted to general superintendent sawmills in the western district of Vancouver Island. He joined the Alberni Pacific company mill in 1927 as a setter.

Lewis Hunt Mills, 60, for several years prominently identified with logging and lumbering in Pacific Northwest, died at his Portland, Ore. home March 5 following a year's illness from cancer and heart condition. Prior to graduation from Harvard, he set chokers in Columbia River logging camps. After graduation he affiliated with Peninsular Lumber Co., in Portland, for several years. Later, in the '20s, he started his own logging operation, subsequently becoming manager of Tidewater Timber Co. Other organizations with which he became prominently concerned include MJB and Skagit-Linn operations in northern Washington, Mist Logging Co., and Trask Lumber Co.

it's in there "ROCKING"

Where big logging trucks soon will roll, the road foundation has got to be firm. It takes rugged machinery to build a heavy-duty road. This Caterpillar No. 12 Motor Grader is "rocking" the foundation with shale for the J. Neils Lumber Co. of Klickitat, Wash., who are "repeat" owners of Cat* Graders to build and maintain their logging roads.

Note how the bulldozer on the front of this husky Caterpillar No. 12 spreads the shale ballast, and the grading blade behind smooths the surface. To do this job economically, in a single operation, takes power, traction and a ruggedly built grader.

Only Caterpillar Motor Graders are built entirely by a single manufacturer. Their precise balance between weight, power and working speed gets the most out of the machine. The Cat Grader in this picture delivers a full 100 HP from its Diesel engine, without fouling, on low-cost No. 2 furnace oil. *Of all the Motor Graders built by Caterpillar, 99% are still on the job!*

Your Caterpillar Dealer will gladly demonstrate to you, on the job, the features that make Cat Graders fast and easy to operate: wide range of blade positions, unobstructed operator vision, and constant mesh transmission. And your dealer backs the machines he sells with fast, dependable service and a big stock of genuine Caterpillar parts. Call him today.

Caterpillar Tractor Co., San Leandro, Calif.; Peoria, Ill.

CATERPILLAR*

*Both Cat and Caterpillar are registered trademarks—®

NAME THE DATE... YOUR DEALER WILL DEMONSTRATE

Forest Industries News

Hoo Hoo's Snark of the Universe Arthur H. Geiger, Tacoma, Wash., has appointed A. F. "Sandy" McDonald, Vancouver B. C., to fill a vacancy on the Supreme Nine resulting from the death of Martin J. McDonald. McDonald takes over as Supreme Jabberwock, head of Jurisdiction V, which includes all of Canada.

Ed Kellenberger of the Kell Lumber Co., and Round Top Lumber Co. Sweet Home, Oregon, has been elected president of the Western Forest Industries Association. The association met at Victoria, B. C., in March. Other officers elected were: Ray Swanson, Swanson Brothers Lumber, Noti, Ore., and John Harris, Redding Forest Products, Redding, Cal., vice presidents. George E. Owens. Dick Owen Lumber Co., Eugene, secretary-treasurer. R. T. Titus was re-elected executive vice president.

While demand for forest products in Ontario should continue stable, the boom is over and costs have crept dangerously high, according to H. H. Styffe, recently re-elected, for the eighth consecutive year, as president of Thunder Bay Timber Operators Association, Port Arthur, Ont. Vice-president is A. J. Auden, Abitibi Power & Paper Co.; executive members, M. Cochran, Hammermill Paper Co.; A. M. Jones, St. Lawrence Corp.; P. V. LeMay, Marathon Paper Mills of Canada; H. S. Mosher, Newaygo Timber Co.; J. H. Godden, Great Lakes Paper Co.; A. F. Buell, Long Lac Pulp & Paper Co.; secretary-manager, T. S. Jones.

Weyerhaeuser Timber Company in ested $36,923,109 in the Pacific Northwest for plant expansion and modernization during 1952, according to the company's annual report to shareholders. This was the largest amount spent in any single year, and brings the total spent for new plants, equipment, and roads during the post-war period to $160 million. Plans call for expenditure of approximately $30 million during "Looking ahead," president J. P. Weyerhaeuser said, "the physical volume of shipments for 1953 should be at a higher level due to the company's new and expanded facilities and the pulp and hardboard facilities now being constructed. On the other hand, with materials in more ample supply, we must be prepared for increasing competition."

United States Plywood Corporation's net profit for the nine months ended January 31, 1953, exclusive of unconsolidated equities, was $4,136,900, after $3,036,300 income taxes. The net profit was equal to $2.41 per common share and compared to $2.44 per share in the corresponding nine months of the preceding fiscal year.

The many friends of Charles R. Barnum, 53, well-known California timberlands broker were shocked to learn of his death recently after a short illness in a Eureka hospital. He was a former chairman of the Humboldt County Republican Central Committee a delegate to the 1948 and 1952 Republican National Convention, and a member of the Electoral College.

More than 440 one-man power saws are now in use in northwestern Ontario, according to a survey recently made by Thunder Bay Timber Operators Association. All these one-man power saws are privately owned.

Robert F. Dwyer, vice president and logging manager of Dwyer Lumber Co., Portland, Ore., was appointed last month to Portland University's associate board of lay trustees.

R. J. Blitch, The Pacific Lumber Company, Scotia, has been elected chairman of the traffic committee of the California Redwood Association. Other members of the committee are G. B. McLeod, Hammond Lumber Company; S. A. Bishop, Union Lumber Company; E. G. Davis, Simpson Logging Company; D. H. LeBreton, Rounds and Kilpatrick Lumber Company; and CRA Traffic Manager A. Larsson.

Fred H. Lang has been appointed State Forester of Arkansas. Arkansas has recently established a State Forestry and Parks Commission. Lang was director of the former Resources and Development Commission.

DEPENDABLE SAWS

Custom Made for the Timber Trade since 1775

INTO every Spear & Jackson Saw goes the experience of over 178 years of saw making, the best available material and every proven technique.

Thoroughness in every detail of manufacture assures you of a dependable saw that does a first class job always.

SPEAR & JACKSON

"The Saw Without a Flaw"

EUGENE, OREGON, U.S.A.

VANCOUVER, CANADA — SHEFFIELD, ENGLAND

The World's Oldest Makers of Saws

Forest Industries News

Authorizations granted by F.C.C. for Forest Products Radio Service Industrial radio systems in first two months of 1953 include following: Cody Logging Co., Ore.; Crane Mills and Fibreboard Products, Inc., Cal.; M. R. Prestridge Lumber Co., N. Mex.; Whiting Bros.; Inc., Ariz. & N. Mex.; Temple Lumber Co.—first grant in this service in state of Texas; West Virginia Pulp & Paper Co., N. C.; Rice Veneers, Inc., N. Y. In the special industrial category, Weyerhaeuser Timber Co. received authorization for 150 mobiles and one base station for Longview, Wash. plant. As of early March, 23 new system applications were pending authorization.

A. R. Entrican, Director of Forestry for the New Zealand Forest Service, recently visited a number of Pacific coast lumber and pulp and paper plants. After visiting foresters and plants from Vancouver, B. C. to San Francisco, Mr. Entrican continued his trip to England, Sweden and Finland. He returned home via the Pacific Coast and Vancouver, B. C.

Pat Soderberg, wel-known logger and lumberman, who recently operated at Pe-Ell, Wash., is now associated with Diamond Lumber Co., Lees Camp, Oregon, with Pat Gould.

Hank H. Waymire, well known logger, is now associated with Lewis River Logging Co., at Amboy, Wash., as logging Superintendent. He is operating with Ed F. Baker, prominent logging operator, in the Amboy area.

George Navatney, for a number of years superintendent of the Wagner Lumber Co., Twisp, Wash., is now superintendent of the Oregon Lumber Co., Bates, Oregon.

Long Lac Pulp & Paper Co., Terrace Bay, Ont., subsidiary of Kimberly-Clark Corp., has brought its new sawmill into production, designed capacity being 50,000 board feet per eight hour shift.

David T. Mason, head of consulting forester firm Mason, Bruce & Girard, Portland, Ore., will marry Miss Loa Howard, administrator of Oregon Welfare Commission, early in May, according to recent announcement.

The new four-hundred page Timber Trends Study, a joint publication of the Secretariats of FAO and ECE, predicts "all kinds of difficulties for 1960 if European Governments maintain their timber production at its present "startlingly stable" low level. In an expanding economy, it says, "it is abnormal that the production and consumption of a basic material like timber should remain unchanged for decades." It indicates that only the implementation of a "dynamic" forest policy will enable Europe to meet the high level of prospective demand in 1960.

Malcolm Epley, Jr., has been appointed assistant in the promotion department of Western Pine association, promotion manager Joseph W. Sherar has announced. Epley, 25, will handle public relations and develop promotion material.

Two former government foresters are now associated with the consulting forestry firm of Mason, Bruce and Girard, Portland, Ore. Lucien B. Alexander, assistant to the regional forester of the Bureau of Land Management, Portland, resigned to join the firm in February. Lyle A. Cummings, formerly in timber management work on the Gifford Pinchot National Forest, who came with the company two years ago, has been made a partner in the firm and now heads its cruising department.

After 17 years of guiding the school of forestry at the University of Idaho, Dean D. S. Jeffers is retiring this spring. The school he has headed is regarded as one of the finest in the United States, and his services in the conservation field have been greatly felt in the important timber state of Idaho. The dean is noted in his work for trying to get forestry students to expand their intellectual horizons and to broaden their outlooks through acquaintance with the liberal arts, on the theory that there is more to life than making a living on one's technical ability.

FORD'S *Heavy Duty* INDUSTRIAL ENGINES

meet America's most popular power needs!

FORD "134" 4-CYL., O.H.V.

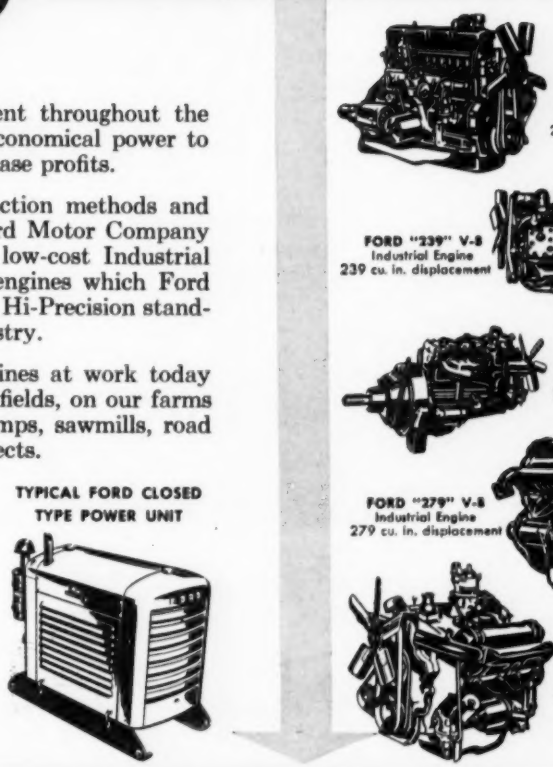
Ford's Overhead Valve Industrial Engines have been thoroughly tested and highly accepted for industrial applications in the field, and now a 4-cylinder power plant of the same type is being offered. This Ford "134" cu. inch engine incorporates notable advancements for still greater performance and operating economy. Bore: 3.4375 in. Stroke: 3.6 in. Rating (dyn.): 45 b.h.p. @ 2400 rpm.

Manufacturers of powered equipment throughout the U.S.A. are constantly in search of economical power to speed productive activities and increase profits.

Because of its efficient mass production methods and nationwide service facilities, the Ford Motor Company is a popular source of economical, low-cost Industrial Power. *Here* on this page are the engines which Ford has designed and built to its famous Hi-Precision standards *especially* for the needs of Industry.

You'll find these Heavy Duty Engines at work today powering equipment in our vast oil fields, on our farms and in factories, around logging camps, sawmills, road building and huge construction projects.

If you're interested in any of the engine series shown, one of Ford's Staff of Sales Engineers will be glad to discuss your power problem and perhaps help you solve it advantageously.



FORD "219" 6 cyl. Industrial Engine 215 cu. in. displacement

FORD "239" V-8 Industrial Engine 239 cu. in. displacement

FORD "254" 6 cyl. Industrial Engine 254 cu. in. displacement

FORD "279" V-8 Industrial Engine 279 cu. in. displacement

FORD "317" V-8 Industrial Engine 317 cu. in. displacement

TYPICAL FORD CLOSED TYPE POWER UNIT

FORD MULTA-TORQUE CONVERTER

Ford INDUSTRIAL ENGINES AND POWER UNITS

YOUR JOB IS WELL POWERED WHEN IT'S FORD POWERED

CLIP AND MAIL THIS HANDY COUPON TODAY!

INDUSTRIAL ENGINE DEPARTMENT
FORD MOTOR COMPANY, 15050 Woodward Ave., Highland Park 3, Michigan

WE ARE INTERESTED IN INDUSTRIAL POWER FOR:

_____
(state your application)

Please send us latest literature on Ford Industrial Engines checked below:

☐ "134" 4-Cyl. ☐ "215" 6-Cyl. ☐ "239" V-8 ☐ "254" 6-Cyl.
☐ "279" V-8 ☐ "317" V-8 ☐ "MULTA-TORQUE" Converter

FIRM NAME _____ YOUR NAME _____
(Please Print)

STREET ADDRESS _____

CITY _____ ZONE _____ STATE _____

UNOBA Grease Keeps "Daddy Longlegs" Rolling

Dependable lubrication is vital to trouble-free operation of straddle trucks like this. That's why so many leading lumbermen make sure their equipment has the protective lubrication of UNOBA grease.

UNOBA gives outstanding protection against rust and corrosion. Even steam cleaning and boiling water don't remove UNOBA'S adhesive film.

UNOBA eliminates excessive wear because its tenacious coating cushions straining and grinding gears, helps absorb shocks.

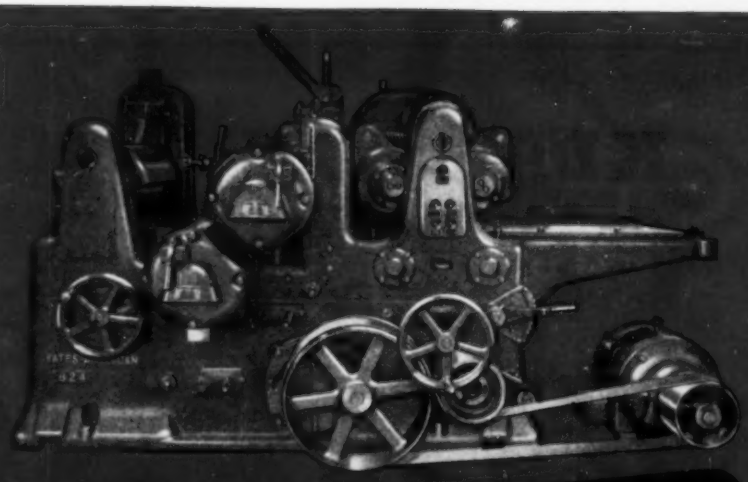
UNOBA is a multi-purpose grease. By using UNOBA you reduce grease inventories . . . lessen the chance of using the wrong lubricant . . . save yourself time and money.

Give your equipment the dependable protection of multi-purpose UNOBA grease.

UNION OIL 76 COMPANY OF CALIFORNIA

B-24

Model B-24 features Feed Speeds from 75 to 200 fpm. Built in 15, 20, 24 and 30-inch widths. Close coupling enables it to take stock 52 inches long without butting. Equipped with six 10-inch solid type rolls. (*Sectional rolls extra*). Top and bottom cylinder heads, 6 or 8 knives, 8-inch cutting circle. Every shaft runs in ball or roller bearings. Regularly furnished with 40 HP on top head, 20 HP on bottom head and 15 HP feed motor. Heavier horsepower motors available. Push button controls.



MORE RUGGED—MORE KNIVES—FASTER FEED RATES! on these quality DOUBLE SURFACERS

You get lots of "plus-value" in these big Yates-American Double Surfacers. They are heavier, more rugged machines that will give you heavy-duty production day after day. They are equipped with more knives, handle wider stock, afford faster feed rates. Choose the model that fits your needs . . . choose Yates-American for performance, production, and dependability. Write for complete information. Furnished direct motor driven or belt driven; motorized adjustments available for direct motor driven models.

Yates-American

BELOIT, WISCONSIN

BRANCH OFFICES: CHICAGO, ILLINOIS; HIGH POINT, NORTH CAROLINA; MEMPHIS, TENNESSEE; PORTLAND, OREGON

B-64

Model B-64 features Feed Speeds up to 450 feet per minute. Built in 15, 20, 24 and 30-inch widths, with 8-inch opening for thickness. Takes stock up to 55 inches long without butting. Equipped with six 12-inch solid type rolls (Sectional rolls extra). Top and bottom cylinder heads, 8 or 10 knives, 9-inch cutting circle. Regularly furnished with 70 HP on top head, 35 HP on bottom head and 30 HP feed motor. Heavier horsepower motors available. Push button controls.

KLAMATH MACHINE
& LOCOMOTIVE WORKS, INC.

designers and builders of

HIGH GRADE Sawmill Machinery

Look for the Indian Head on all **KLAMATH MACHINE products**

REPAIRS AND MAINTENANCE? Do you need expert and experienced repair or maintenance work on your sawmill equipment? We maintain an active service department for just that purpose. Write, wire or call us. We'd like to serve you and put your equipment in first class condition.

Band Mills • Carriages

Cranes—HAND AND ELECTRIC OPERATED

Electric Deck Saws • Edgers

Dogs—AIR AND HAND OPERATED

Mechanical Tail Sawyers • Trimmers

Loading Blocks • Steam Feeds

Niggers • Log Loading Equipment

Vertical Resaws • Valve Controllers

Roll Cases • Skid Lifts • Transfers

Valves—AIR DOG · NIGGER · SHOT GUN

Carriage Rails • Carriage Trucks

Deck Machinery—LOG HAULS · LOG CLAMPS
LOG STOP AND LOADER · LOG KICKER

Export Division: **FRAZAR & HANSEN, Ltd.**
301 Clay St., San Francisco 11, California, U. S. A.

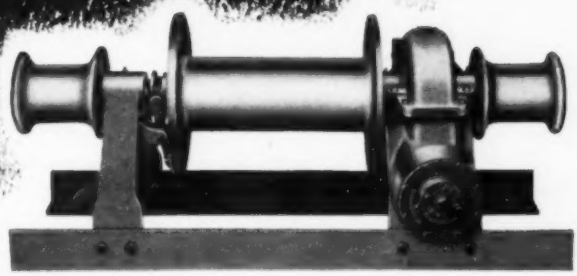
KLAMATH MACHINE
& LOCOMOTIVE WORKS INC.

P. O. BOX 208 • KLAMATH FALLS, OREGON, U. S. A.

Look for the Indian Head on all **KLAMATH MACHINE** *products*

FOR A LIFT OR A PULL

THE JOB CAN BE DONE BETTER WITH



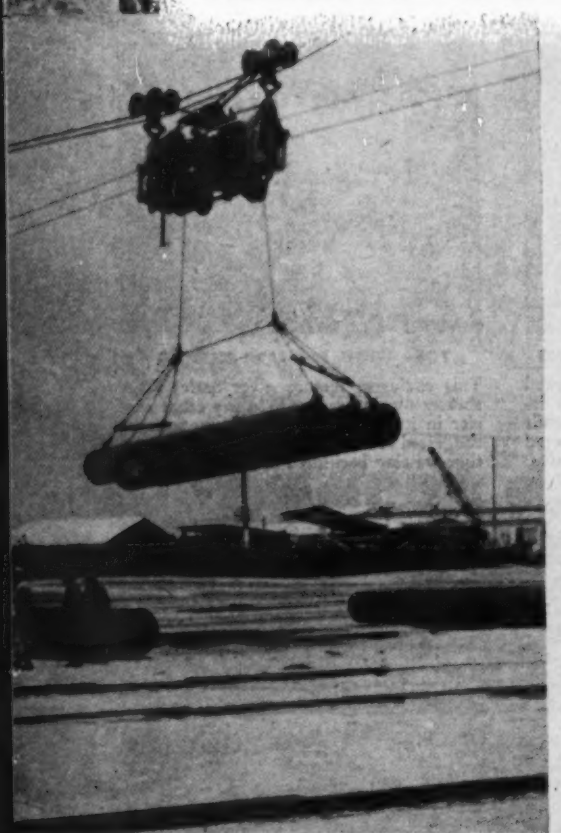
Tulsa* Winches

In Arabia or in Oklahoma, pipe line contractors rely on Tulsa Winch to handle the heavy work.

In the top illustration, this pipe line road boring machine is self-powered. The winch line from the Model 19 Tulsa Winch is anchored to a dozer or a tree and the Winch powers the machine forward by reeling in the line.

In the illustration left, a cable-way was erected to transport pipe from ships anchored in the harbor to shore. Pipe is lifted three joints at a time by a Tulsa Winch installed in the cable car. The car is self-powered.

These are just two illustrations of the versatility and dependability of Tulsa Winch. Tulsa Winches are made in 28 models, in capacities from 6,500 to 80,000 lbs. for all makes and models of trucks and crawler tractors.



Tulsa* Winch
TULSA, OKLAHOMA
DIVISION OF VICKERS Inc.

*Reg. U. S. Pat. Off.

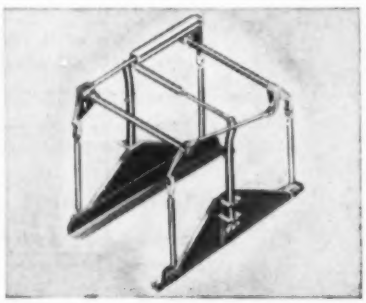
Lumber handling problems?

ROSS SERIES 80 STRADDLE CARRIER

Streamlined right down to fighting trim, Series 80 is as efficient as it looks. That's why it moves lumber *fast* . . . and *keeps* it moving day in and day out at surprisingly low cost. Let this 20,000-pound capacity "middleweight king" of straddle carriers help lick your lumber handling problems.

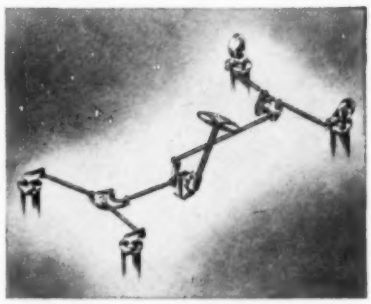
UNEXCELLED ROAD-LOAD VISION

Driver can easily see a 5-foot man 7" from front, 12" from right corner, 28" from right side of carrier . . . and has clear view of load hooks when straddling loads.



HYDRAULIC HOIST AND HOOK SWING

Powerful, fast and smooth. Loads picked up and set down with precision . . . no delays, no waste motion . . . more pay-loads per hour. Hoist automatically protected against overloads by built-in safety valve.



FOUR-WHEEL RADI-ARC STEERING

This exclusive feature gives Series 80 a shorter turning radius than any other carrier in its class. Narrow runways, ramps, congested areas readily negotiated without time-wasting backing and turning.

Get full details on the many advanced-engineering features of Ross Series 80 Straddle Carrier . . . you'll be 'way ahead.

Rely On ROSS

THE ROSS CARRIER COMPANY

Direct Factory Branches and Distributors throughout the World

240 MILLER STREET, BENTON HARBOR, MICHIGAN, U.S.A.

TRY A Mall 2MG

IN YOUR OWN TIMBER

The Lightest, Most Powerful One-Man CHAIN SAW Ever Built!

5 H.P.

only 29 lbs.

WORK-PROVED TIME-TESTED | IN ALL TYPES OF TIMBER

You've never seen a chain saw like the sensational MALL 2MG. Imagine! 5 hp. to give you the fastest, smoothest cutting of any one-man saw ever built—yet only 29 lbs. of perfectly balanced saw for easier handling than you could ever imagine. AND LOOK AT THIS LINE-UP OF FEATURES: automatic clutch, touch-control throttle, all position float type carburetor, full 360° indexing, automatic chain and sprocket oiler, fast-cutting chrome-plated chain, all-weather one-hand rewind starter with dust- and rain-proof hot-spark magneto, and dozens more.

DON'T FORGET that MALL replacement saw chain is available in cut lengths or hundred foot reels to fit all standard chain saws.

MALL TOOL COMPANY
7716 S. Chicago Ave., Chicago 19, Illinois
IN CANADA: Mall Tool Ltd., 36 Queen Elizabeth Blvd., Toronto, Ontario

40 Factory-Owned Service Warehouses and 1,000 Dealers, Coast to Coast

MAIL THIS COUPON TODAY

I would like to receive, without obligation, a FREE demonstration of the MALL 2MG Chain Saw.

Name_____

Company_____

Address_____

LU-13

Skagit

SJ-8

MOBILE LOGGER

A combination Yarder-Loader . . . strongly constructed . . . designed for fast road travel . . . quickly set up with powered guy lines and hydraulic jacks . . . capable of getting maximum production with a minimum crew in small or larger timber . . . on rough or favorable terrain . . . at unbelievably low production costs . . .

Here is a solution to the logging problem of the timberman who is faced with the job of cleaning out beetle-infested timber, blow downs, hard to get pockets and corners . . . or on selective logging shows where rigging costs for conventional methods would be prohibitive . . . And, of course, it is a fast, economical, efficient production tool on the easier, conventional shows.

The SJ-8 is the larger of the Skagit Mobile Loggers.

FOR COMPLETE INFORMATION CONSULT YOUR DISTRIBUTOR OR THE FACTORY

"SKAGIT" IS TRADEMARK REGISTERED U. S. PATENT OFFICE

SKAGIT STEEL & IRON WORKS SEDRO-WOOLLEY, WASHINGTON U. S. A.

it's POWER PACKED for "TOUGH TOWS"

● It takes a solid wallop of *power* to capably handle rafts like this—66 logs, 120,000 feet—against a strong wind. The Evinrude Big Twin, delivering 25 certified horsepower through a big propeller, *has what it takes!*

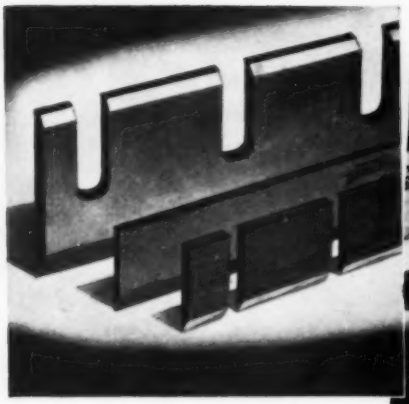
The Big Twin purchased by Simpson Logging Company, Klamath, California, for timber cruising, successfully tackles jobs formerly considered beyond the range of outboard power. Big Twin is ruggedly built for years of hard service. Gearshift with Neutral, Forward, Reverse gives exceptional maneuverability. Separate, large capacity fuel tank provides long range fuel supply.

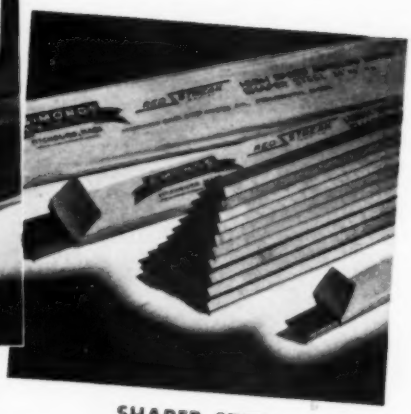
See the Big Twin and the complete line of models at your Evinrude dealer—look for his name under Outboard Motors in the yellow pages of your phone book. For free literature write . . . EVINRUDE MOTORS, 4191 N. 27th St., Milwaukee 16, Wis.

In Canada: Manufactured by Evinrude Motors, Peterborough, Ontario.

BIG TWIN
25 H.P., gearshift, Cruis-a-Day Tank. Price F.O.B. factory, subject to change.
$390

EVINRUDE OUTBOARD MOTORS





PLANER KNIVES

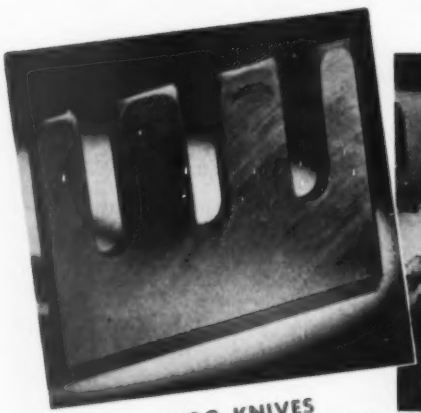
Scientifically heat-treated and accurately ground, Simonds Planer Knives cut fast and smooth . . . have a notable reputation for toughness and long life. All types for round head and square head machines.

SHAPER STEEL

Unexcelled for making special woodworking cutters, Simonds High Speed Beveled Edge Shaper Steel is accurately ground for uniform thickness, width and side bevel. Furnished in 12" and 24" lengths. All standard sizes.

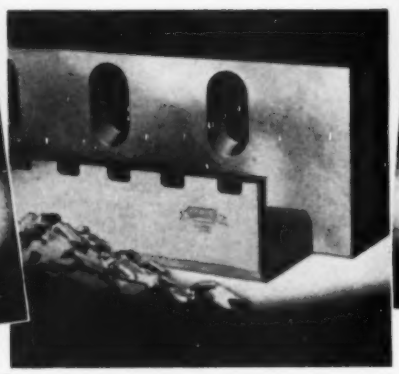
Choose your Weapons!

Fight High Costs with SIMONDS KNIVES



HOG KNIVES

Shock-resisting and tough, Simonds Hog Knives are specially heat-treated to withstand the terrific abuse of daily operation and to maintain their sharp cutting edges without cracking or breaking out. Made for all standard machines.



CHIPPER KNIVES

Simonds T-18 Chipper Knives hold their sharp cutting edges under the most severe cutting conditions . . . produce clean-cut, uniform chips hours longer . . . reduce waste and down time. All standard sizes.

VENEER KNIVES

Uniformly tempered, accurately ground, slotted and beveled, Simonds "Red Streak" Veneer Knives hold their keen edges longer between grindings . . . lessen strain on the lathe or slicer . . . produce higher quality veneer. All standard sizes.

Simonds real "know-how" in machine knife manufacture, based on over 100 years experience in the production of all types of knives, pays off in extra value and extra savings in all kinds of operations . . . saw mills, planing mills, and pulp mills; furniture and fixture factories; veneer and plywood plants . . . everywhere that wood is surfaced, formed or transformed for a specific purpose.

Simonds Steel . . . specially made for each type of knife . . . *plus* precision heat treating and grinding to accurate dimensions add up to far better on-the-job performance, fewer sharpenings, less down time, and lower production costs.

Order through your Simonds Industrial Distributor.

SIMONDS
SAW AND STEEL CO.
FITCHBURG, MASS.

Factory Branches in Boston, Chicago, San Francisco and Portland, Oregon. Canadian Factory in Montreal, Que.
Simonds Divisions: Simonds Steel Mill, Lockport, N. Y., Simonds Abrasive Co., Phila., Pa. and Arvida, Que., Canada

Photo Courtesy Mixermobile Manufacturers, Portland, Oregon

180 horsepowered Scoopmobile loads 4319 yards of wet sand in 31 hours!

No stranger to hard work, this loader. Each time it bends down, a hydraulically operated loading bucket picks up, carries and loads as much as two cubic yards of dirt, rock or sand. Four-wheel planetary gear drive and four-wheel power steering are combined for plenty of power, amazing speed and maneuverability. Five-speed transmission enables top performance under any conditions of terrain.

Like others, this manufacturer powers with Chrysler because he *knows* every Chrysler Engine is engineered for long-lived, top-profit performance. He selected the husky Model 20 Chrysler V-8 Industrial Engine. Result: *more* work in *less* time.

Chrysler can equip its 180 horsepower Model 20, or any of its Industrial Engines, to meet special requirements. For example, Chrysler can supply engines with propane or natural-gas burning carburetor, gýrol Fluid Coupling or torque converter.

Chrysler Industrial Power is not expensive. Production-line methods adapted to specialized engine building provide a custom-built engine at mass-production prices. See a Chrysler Industrial Engine Dealer or write: ***Department 204, Industrial Engine Division, Chrysler Corporation, Trenton, Michigan.***

CHRYSLER
Industrial Engines

HORSEPOWER WITH A PEDIGREE

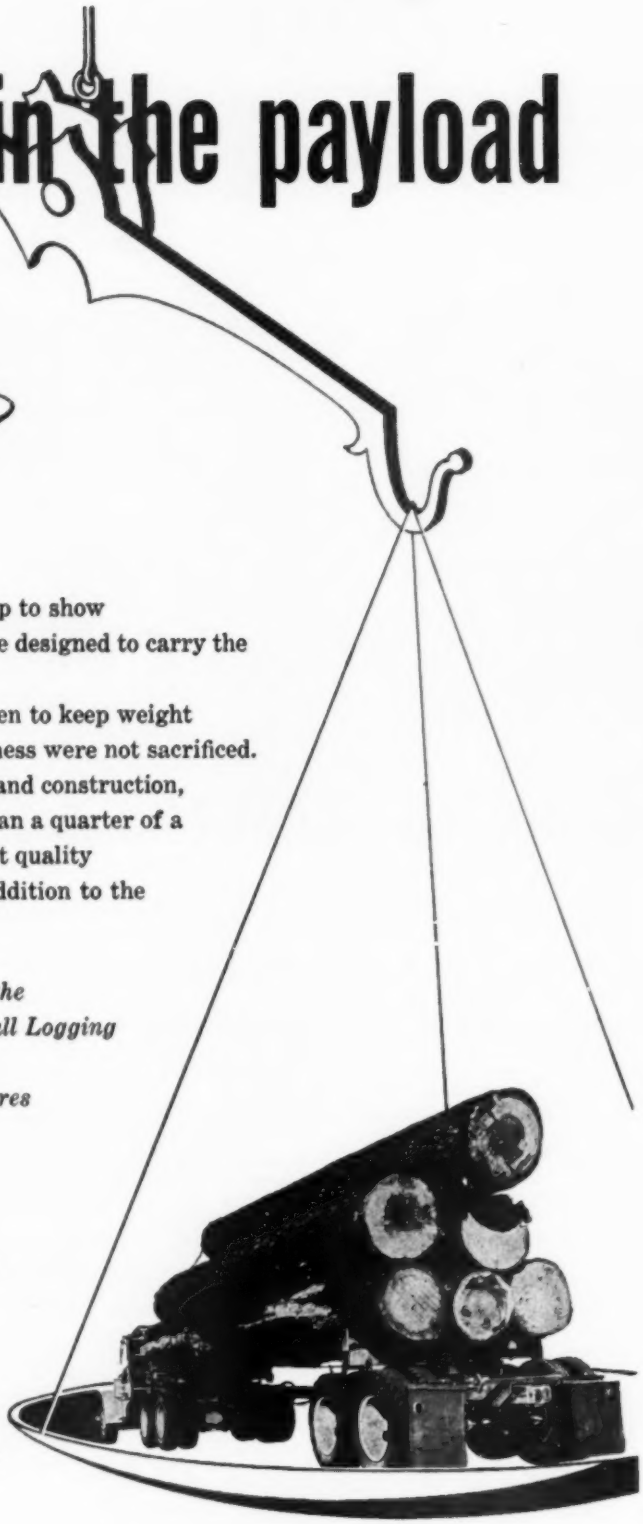
Profits are in the payload

There is no profit in Trailer weight...

that's why Utility Logging Trailers help to show operators greater profit because they are designed to carry the maximum legal load on the highway.
Although careful consideration was given to keep weight at a minimum, wearability and ruggedness were not sacrificed. The same exacting standards of design and construction, together with the experience of more than a quarter of a century in the manufacturing of highest quality trailers, are embodied in this newest addition to the famous Utility line.

Let the Utility representative tell you the "reason-why" story on these finest of all Logging Trailers. Ask him about the many ways the exclusive Utility features can save you dollars.

ADVANCE DESIGN FEATURES
BUILT-IN HYDRAULIC SCALE
POSITIVE AXLE ALIGNMENT ADJUSTMENT
LOW MOUNTED TRUNNION SHAFT
FAMOUS UTILITY 10-INCH BRAKES
EXTRA CAPACITY AIR TANK
EXHAUSTIVELY FIELD TESTED

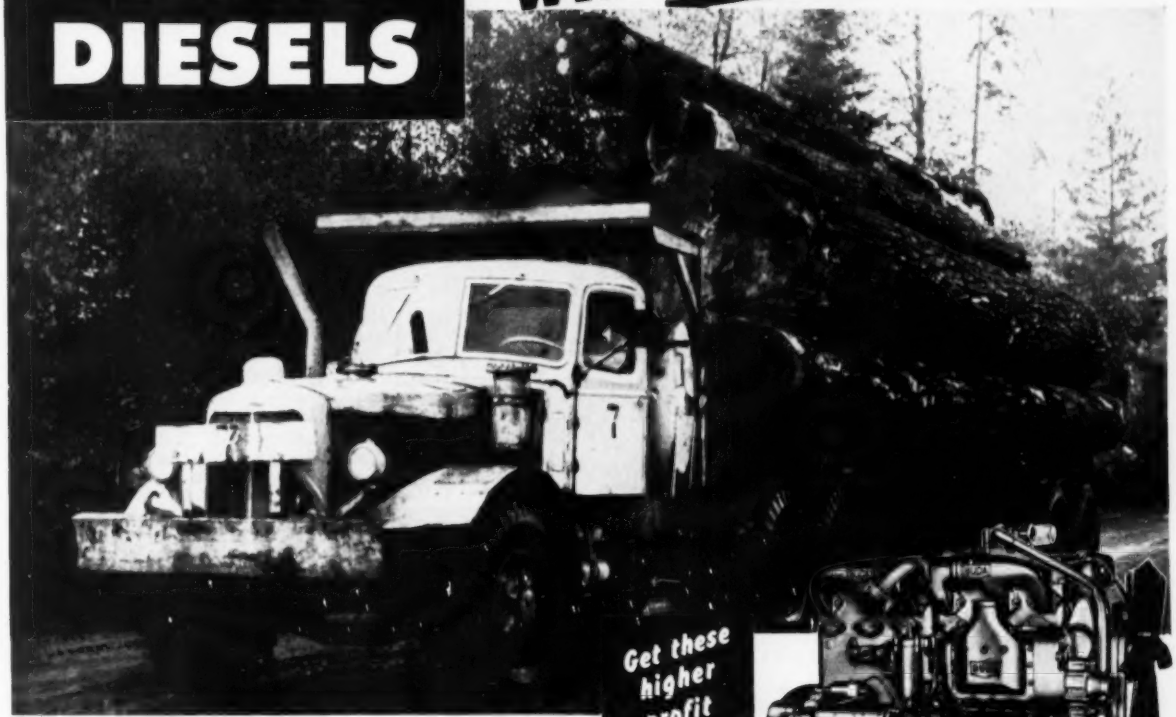


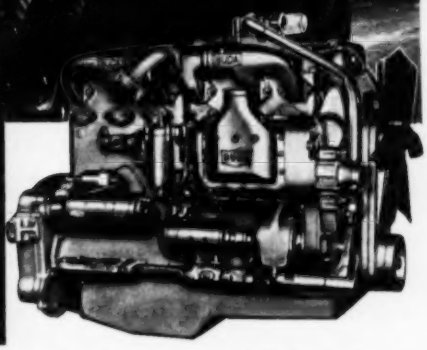
Representatives in all principal western cities

UTILITY TRAILER MANUFACTURING CO.
Los Angeles 54, Calif.

BIG BUDA DIESELS

HAUL BIGGER LOADS at HIGHER SPEEDS with LESS SHIFTING





Get these higher profit advantages with BUDA Diesels

More Power...More Profit with BUDA

Make BIGGER hauling profits with Buda Diesels—the BIG engines built to haul heavy log loads at high speed. Buda Diesels extra torque means less shifting—faster trips—more loads per day. Buda's proven heavy duty design gives you less maintenance, minimum downtime—more hours of profitable operation.

Ask your Buda Engine Distributor about money-making Buda Diesels today. Write for Bulletins and data. *The Buda Company, Harvey, Illinois.*

- ★ **More *useable* horsepower—13-25% greater piston displacement.**
- ★ **Greater lugging ability—9-23% more torque at normal operating speeds.**
- ★ **Dyna-Swirl Combustion—lower fuel cost.**
- ★ **More hours between overhauls—average approx. 6000 hrs.**

BL-8

Buda Engine & Equipment Co., Inc.
3407 Airport Way
Seattle, Washington

Buda Engine & Equipment Co., Inc.
2580 N. W. Upshur Street
Portland 10, Oregon

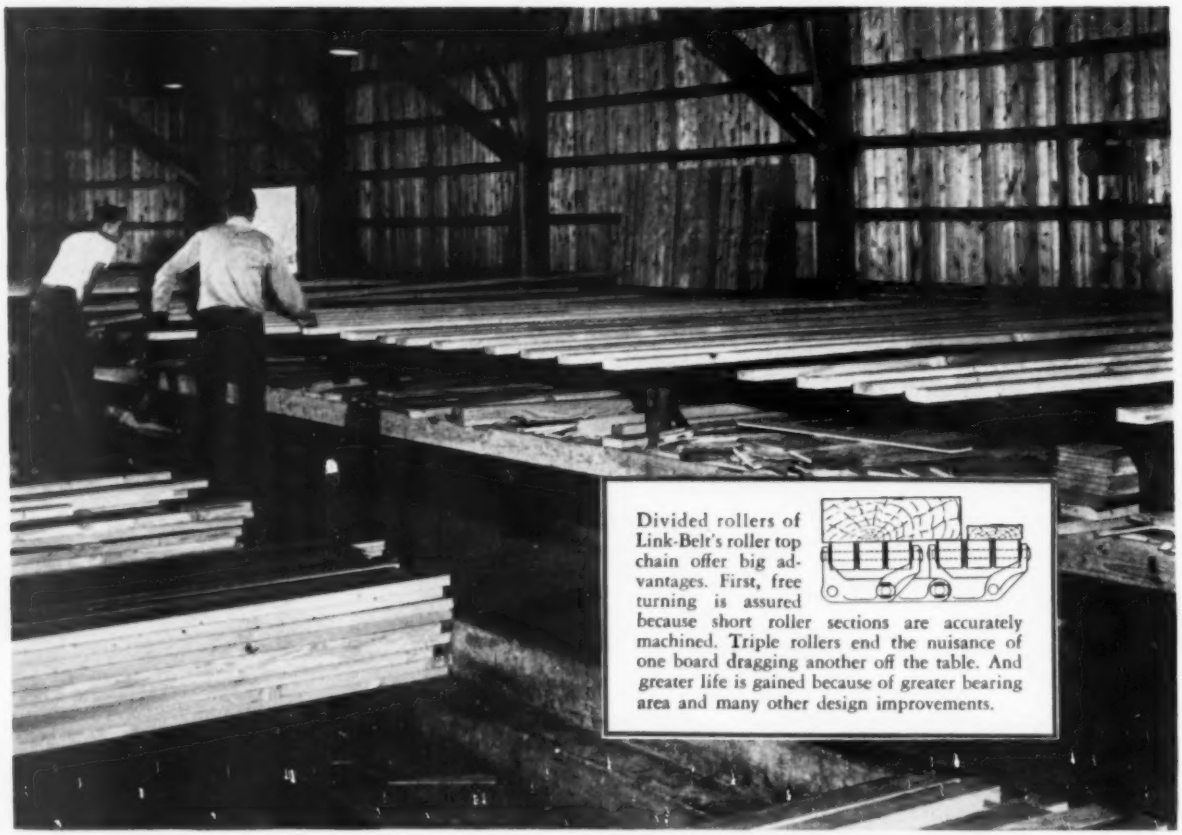
King-Knight Co.
360 Jefferson Street
San Francisco 11, California

Simson-Maxwell, Ltd.
1931 W. Georgia Street
Vancouver, British Columbia

BUDA

Manufacturers of Diesel and Gasoline Engines, Maintenance of Way Products, Lifting Jacks, Earth Drills and Material Handling Equipment

Is there ONE chain that best meets your drive or conveyor problem?



Divided rollers of Link-Belt's roller top chain offer big advantages. First, free turning is assured because short roller sections are accurately machined. Triple rollers end the nuisance of one board dragging another off the table. And greater life is gained because of greater bearing area and many other design improvements.

You'll find the answer in LINK-BELT's complete chain line... a size and type for every job

The application shown above is an example of how you can select the *one* chain best suited for a particular need from the complete Link-Belt line. And each chain is engineered to provide more efficient service at lower cost than so-called general purpose chain.

Whatever your requirements, you are assured of the *right* chain for the job when you rely on Link-Belt. And, remember—a chain bearing the Link-Belt double arrow is your guarantee of longer chain life.

For information on the complete Link-Belt chain line, see the Link-Belt representative near you. He has the answers for efficient, low-cost drive and conveying chain performance.

LINK-BELT

CHAINS AND SPROCKETS

Typical chains from the complete LINK-BELT line

Class SS bushed roller chain with offset sidebars —for heavy drive service at moderate speeds.

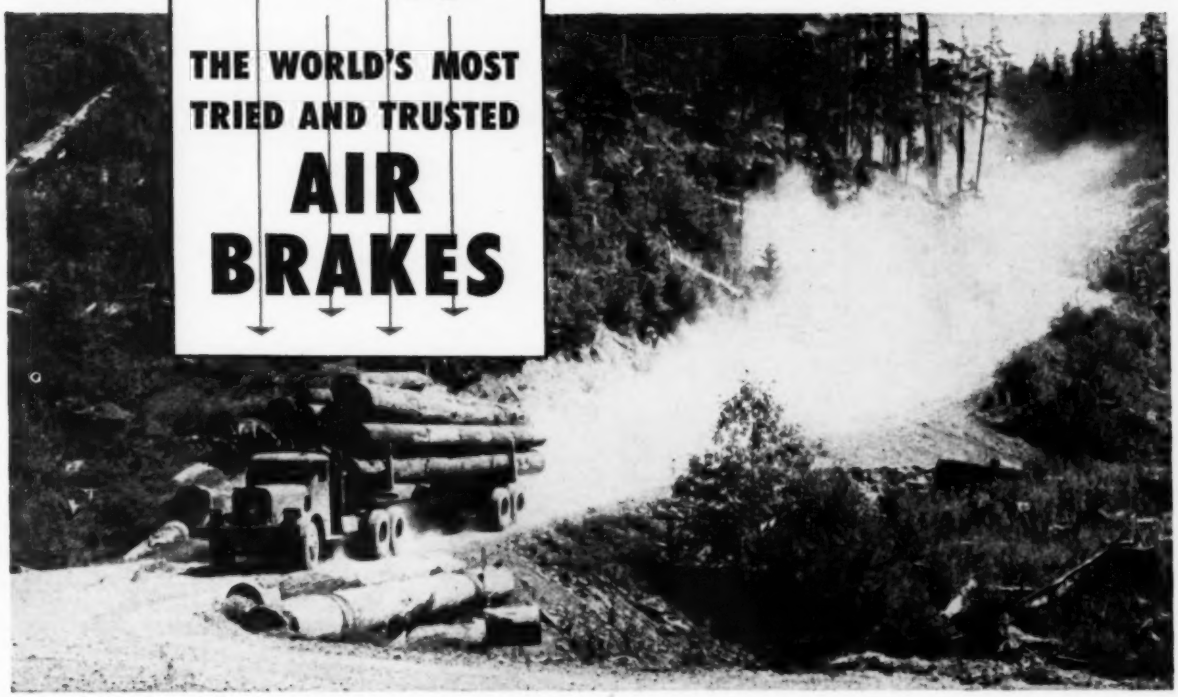
Roof-top pintle chain—for transfer conveyors, each strand presenting a sturdy, moving ridge.

Class H drag chain—for drag conveyors, handling sawdust or other refuse in runways or troughs.

Class H Pintle chain—excellent for conveyors that slide, used plain or with attachments.

LINK-BELT COMPANY • *PACIFIC DIVISION* • Plants and Factory Branch Stores at San Francisco 24, Los Angeles 33, Seattle 4. Offices and Factory Branch Stores at Portland 9, Spokane 13, Oakland 7, Salt Lake City 1. 13.101-F

Bendix-Westinghouse



Assure Maximum Protection
for **Driver, Truck** and **Load!**

Think of the tremendous investment you and your company have tied up in a single, fully loaded logging rig in terms of driver, equipment and potential profit. When you look at it this way, it's easy to see why only the **finest braking protection available** can be good enough—and that means Bendix-Westinghouse Air Brakes! That's why, over the years, the men who own and operate the nation's logging fleets have made Bendix-Westinghouse Air Brakes **first choice for this rough and rugged braking chore.** In addition, these mighty brakes have rolled up a remarkable record of economy through big savings on maintenance, parts replacement costs and reduced downtime. That's because from compressor right on down to brake chambers and slack adjusters, Bendix-Westinghouse Air Brakes are built better by the most experienced manufacturer in the business. So why not take advantage of this **extra all-around performance and protection,** proven wherever logging trucks roll? Always specify dependable, economical Bendix-Westinghouse, the world's most tried and trusted air brakes!

BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY · ELYRIA, OHIO · BERKELEY, CALIF.

FROM WOODS and MILLS

Huntington Shingle Co., Springfield, Ore., has started construction of a 25M ft. per day sawmill alongside its present mill. This sawmill will be used to manufacture lumber from logs unsuitable for production of shingles.

RFC has approved $75,000 loan to **South Coast Lumber Co.**, Brookings, Ore., for construction of a new planing mill. About $50,000 of the loan will be spent for new equipment and the rest for construction of the mill. According to RFC, the loan was granted to help overcome a shortage of planed lumber in this community at southwestern tip of Oregon.

William W. Gilgan, northern manager at Burns Lake, B.C., for **Pacific Western Lumber Co.** of Canada, Vancouver, B.C., has been appointed vice-president, according to Stewart M. Walker, president. Gilgan has been supervising logging in the 350 square miles of Tweedsmuir Park being flooded for the Alcan hydro-electric project in northern British Columbia.

Whittier Mouldings Inc., has purchased the Dant & Russell moulding plant at Redmond, Ore., and has moved the equipment to a new site.

John Lumber Co., is building a new mill at Cloverdale, Calif. This mill will replace one at Gerberville, Calif., which burned last October. The mill will have a daily capacity of from 50,000 to 75,000 feet per day. Associated in this enterprise are T. J. Johnson, president and manager, Glen Johnson and Clarence J. Findley. T. J. Johnson is supervising the construction and will run the plant.

Victor & Sons have erected a band mill on a site a mile west of Wallowa, Ore. Later in the season a log gang will be installed. Alva Victor and his sons John and Allan are owners.

The S H & W Lumber Co., Selma, Ore., have purchased the Broadfoot Bros. mill at Grants Pass, Ore. The plant will be used to surface lumber cut in the Selma mill.

The Anacortes Towboat & Booming Company has established a small sawmill on the Walton millsite at Anacortes, Wash.

William K. Dyche, of Klamath Falls, one of the West's pioneer and best known loggers, died in late February after a long illness. He came to Klamath Falls in 1923 as logging superintendent for the Algoma Lumber Company for 26 years until his retirement five years ago, forced by a home accident which fractured his back.

Grover Woods, for several years with Gardiner Lumber Co. as master mechanic and truck boss, has purchased R & L Shell Service, Reedsport, Ore. where he operated shop specializing in automotive and industrial repairs, Shell products, and Goodyear tires.

Koenig Bros., Kalispel, Mont., was the high bidder for 980,000 feet of timber in the Flathead National Forest. The timber is in an area infested with spruce bark beetle. Price being paid is $2 a thousand over minimum asked for larch, fir and spruce. Spruce minimum asked for 570,000 board feet was $7.30 a thousand, and for the 250,000 board feet of larch and fir, $5.30 a thousand.

Huntington Shingle Co., has started construction of a 25,000 foot circular sawmill adjacent to its shingle mill at Springfield, Ore. The mill will cut logs not suited for shingles.

Johnson Lumber Company is building a new planing mill at Cloverdale, Calif. This mill replaces one at Myers Flat which burned.

Earl Girt and sons **John V.** and **C. O.**, and **Jack L. Walch,** are building a 50,000 foot planing mill at the S P & S wye near the former Holladay station, near Seaside, Ore.

Perma Products Co., manufacturers of sidewalk shakes and stained shingles is rushing work on its new $200,000 plant at Winlock, Wash. This plant will replace a plant at Chehalis which burned last August.

Norris Pole & Piling Co., Everett, Wash.; has established a pole yard and peeling plant at Vernonia, Ore. **J. W. Oster** will be in charge of the operation.

Rollins Lumber Co., Carver, Oregon, recently installed a Blue Babe..54" resaw for refining their lumber. These are built by N. W. Marine Iron Works . . Portland, Ore.

Evergreen Shake Co., formerly at Salkun, Wash., is relocating its plant at Mayfield, Wash. The plant will have a capacity of one carload a week.

The **Washington** legislature passed a bill appropriating $55,000 to help rehabilitate the old Yacolt burn. Provisions call for the forestry department to map, survey and fall snags in the area as well as build firebreaks, access roads and take other steps in protecting the forest production activities of the Burn. Efforts will be made to help provide owners to replant their lands in the area.

Hal Andrus is establishing a small sawmill near 1000 35th Street, Springfield, Ore. The mill will have a capacity of about 20,000 feet for day.

Stil-Van Lumber Co., Halfway, Ore., has been granted approval of $34,000 RFC loan to finance purchase and installation of band headrig, to replace circular unit, and feedworks. Project will include changing from diesel to electric power, required by RFC to "conserve natural resources."

Profits Decline

Due to a variety of adverse circumstances including decrease in average selling prices, higher wage rates, decline of the U.S. dollar and a 45-day industry strike, B.C. Forest Products, Ltd., operating four sawmills in British Columbia, reported a sharp decline in gross profits and in net earnings from preceding years. Net earnings after all charges, including depreciation and deletion, were $1,175,094, compared with $2,709,763 in 1951. Gross profits were $5,659,467 compared with $7,600,976.

Mill Makes Improvements

A number of improvements have been made at the mill of the F. M. Crawford Lumber Corp. at French Gulch, near Redding, Calif.

A new Klamath Iron Works 7' band head rig with 4" riser, powered with a 200 hp Westinghouse motor has been installed, as well as a 72" five saw Klamath Iron Works edger, and a Klamath Machinery Co. automatic log haul.

In the filing room is a new Armstrong band saw sharpener, round saw gummer, and other Armstrong equipment.

R. E. Hendrix is sawmill superintendent. He has been with the company two years and before that was with the Dunsmuir Lumber Co., Mervin Jellison is head filer. He's a nephew of Buck Jellison, who filed for so many years for the Lassen Lumber & Box Co., Susanville, Calif. Mervin learned the game under Jerry Ricker, now with the Robert Dollar Co., Glendale, Ore., and formerly head filer at the Ralph L. Smith Lumber Co., Anderson, Calif., and under Delray Toland, head filer, Scott Lumber Co., Burney, Calif.

C. R. Neal, Veteran Forester, Retires

With 40 years of public service to his credit, Olympic national forest supervisor Carl B. Neal retired February 28. A native of Nebraska, Neal's entire career has been pursued in the Pacific Northwest. Following appointment to a Forest Service position in 1913, he worked as resource manager and administrator on several Oregon forests and in the Portland regional office until assigned as supervisor of the Olympic forest in 1939.

A member of the Society of American Foresters, Neal received a BA degree from the University of Oregon in 1910 and a master of forestry degree from Yale Forest School in 1913.

Dempsey Never Left Home

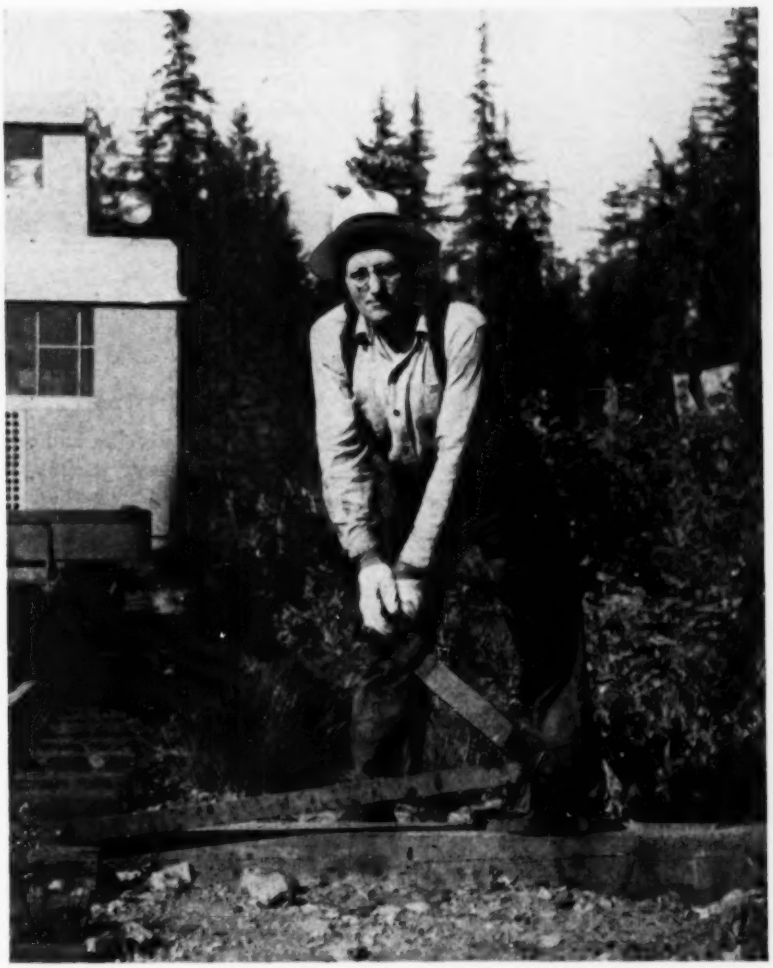
By Stewart Holbrook

Frank Dempsey was born in the woods and lived up to the best lumberjack tradition by following the timber West—but not very far. Sixty-odd miles from his birthplace was the farthest West he could go and stay on land. For many years he has been running the woods operations of the Ozette Timber Company which are centered around Ozette Lake, the westernmost body of fresh water in the United States, on the far edge of Washington's Olympic Peninsula.

Dempsey also happens to be the only woods boss I know who was thrown 74 feet by a flying line to light smack on his head in a cold-deck of logs—and live. When he came to, three weeks later, and left the hospital, six months after the accident, he was already a bunkhouse legend, the one and only Indestructible Dempsey.

This solid, square-rigged man was born Francis Dempsey at Joyce, a tiny logging community set in the middle of the howling wilderness that stretched, in those days at the Century's turn, from Puget Sound to the Pacific shore. He got his book-learning in the Joyce school. His early logging education was acquired on Vancouver Island under a master, C. C. (Loading Boom) McLean, who was the first subject in this series of personality stories.

After a normal short-stake period in Canada, and side excursions to Index, Saxon, and Sedro-Woolley, all in Washington, Frank returned to his native woods, to work in the rigging, top spartrees and run camps, on the Soleduck river, at Lake Crescent and at Lake Sutherland. In 1940 he moved to the edge of the continent to run the woods for the Ozette Timber Company.



Frank Dempsey, well-known boss of the woods for Ozette Timber Company, near Ozette Lake on the outer tip of the Olympic Peninsula. Frank was born at Joyce on Juan de Fuca Strait, and has had a colorful career in the big timber, always within a few miles of this spot.

Ozette's timber is in the great rain forest, which Frank considers the finest place on earth to log. It is damp overhead, and damp underfoot. Snow is never a problem. The loggers are impervious to rain. (Dempsey claims the Ozette rain is warm.) A much greater problem than forest fire is getting the Ozette slash to burn.

The company operates two camps and 30 miles of railroad. The timber, even by Northwest standards, is immense. It runs 20 percent spruce, 40 percent cedar, and most of the remainder is hemlock. Ozette loggers fell spruce as big as 13 feet in diameter. Several cedars have been 15 feet on the stump. A fair sample of a hemlock tree scaled 7,000 feet, Scribner Rule.

It's big timber and there is a lot of it. When and if he gets around to calling it a day, it seems likely that Frank Dempsey will have put in the best part of a lifetime logging within sixty-five miles of Joyce, where he was born.

Look at the timber-handling operations around any big logging camp in Washington, Oregon or California, and you'll see wire rope doing jobs that your grandfather wouldn't have believed. Strong, flexible wire rope on tractors, skylines, high leads and booms of all sorts is moving the big logs fast and cheap. And much of this is Bethlehem wire rope.

Bethlehem ropes are manufactured in a full range of sizes and constructions suitable for logging equipment of any make or type. Ask your dealer about them. He knows.

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When you want...

Plenty of Power...

full 133 drawbar h.p. with the lugging power stepping up as the engine slows down under load ...power that keeps working on both tracks, even on turns.

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finger-tip air steering and over-center clutch bar that cut operator fatigue to the minimum... permit virtually "one-hand" operation of the tractor—no "footwork."

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no fuel wasting because power on both tracks means less power required on turns...balanced design eliminates cost of hauling unneeded "deadweight."

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Easy accessibility that means simpler, easier maintenance...power on both tracks at all times eliminates severe shocks and strains on gears... less loading on side frames.

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When you buy a Bucyrus-Erie crane-excavator, you buy a machine with proven ability to handle many different logging jobs. Whether building access roads, improving haul roads, handling logs at transfer points, or leveling camp sites, Bucyrus-Eries bring speed, dependability and economy to the job. 27E53

SPEED

For excavating work, you can't beat Bucyrus-Erie's superbly balanced dig-swing-dump cycle. Shovel functions are blended into a smoothly coordinated cycle that produces heaped loads on every pass, more passes per hour.

DEPENDABILITY

For crane work (either with standard crane front end or with log hoeing boom), there's accurate control that keeps the operator in constant touch with the load, lets him spot and place logs right where he wants them, without waste motion.

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Both shovel and crane have the durability that means long machine life and lowest maintenance costs.

To these outstanding features add the sure-footed crawler mounting that enables the machine to climb steep grades and to work in close quarters, and you'll see why a Bucyrus-Erie is called a logger's handy man. Why not lay plans now to have a Bucyrus-Erie working on your tract? We'll be glad to give you complete information.

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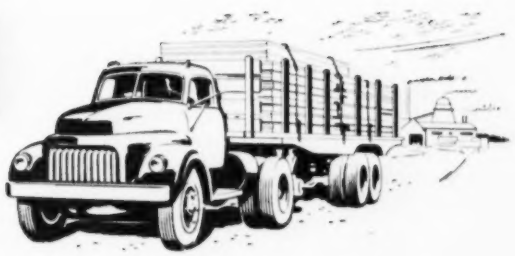

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FOR MORE THAN 50 YEARS THE GREATEST NAME IN TRUCKS

Progress in Motor Grader Design

Allis-Chalmers new AD-40 shows importance of visibility. Operator can see front wheels — both ends of blade while he works.

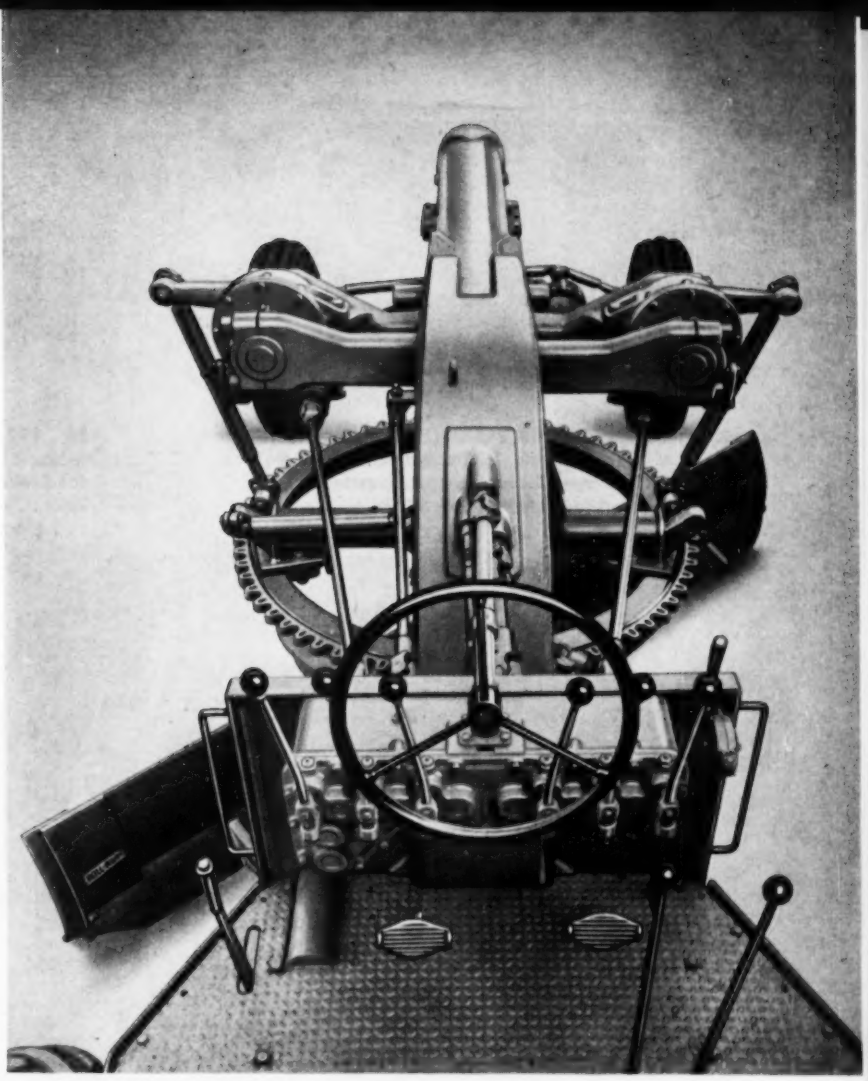
A MOTOR grader operator has to be able to see his work to do a good job. This is of prime importance in building and maintaining logging roads.

Here is how Allis-Chalmers engineers made sure the new AD-40 met these requirements. They carried A-C's single member frame all the way from the front axle to the platform; cut down the size of the lift cases to eliminate blind spots; lowered the control box and eliminated assemblies from the front panel to provide better visibility of the work area directly in front of the operator; tapered the front edges of the platform so that he could see both ends of the moldboard as he works.

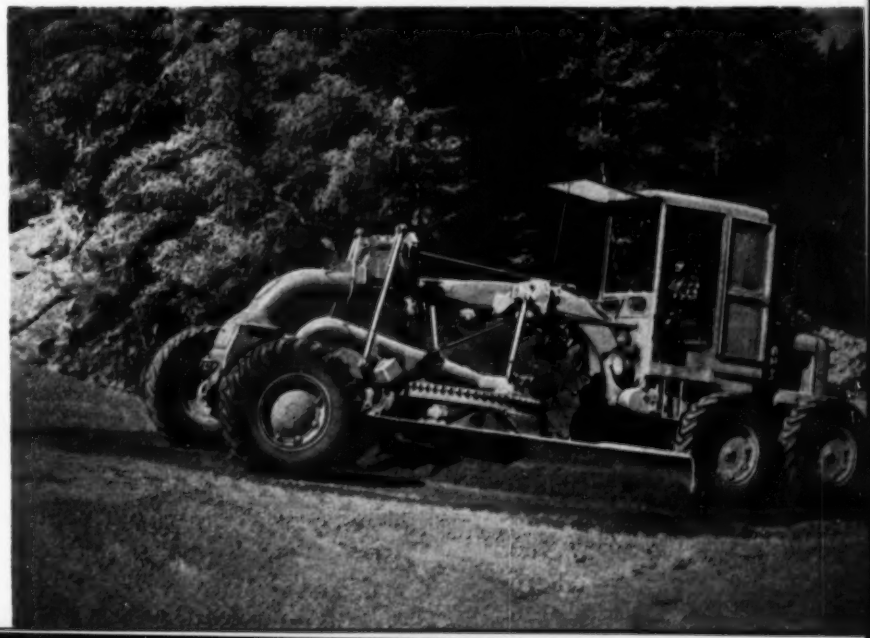
There is not only ample leg room for stand-up operation but the steering wheel height is adjustable and the seat rolls forward at a touch for sit-down operation.

Combined with a new kind of power steering, these advanced design features are making Allis-Chalmers AD-40 an increasing favorite with operators and owners alike because it means more work done with less effort. For more facts on the AD-40, it will pay you to see your nearby Allis-Chalmers dealer.

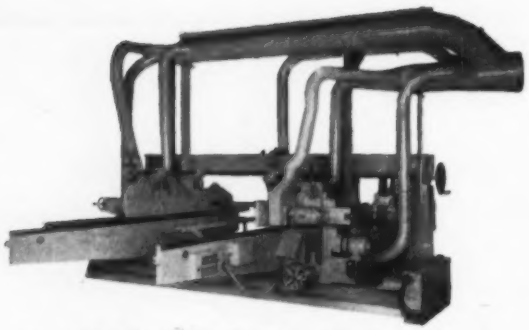
ALLIS-CHALMERS
TRACTOR DIVISION • MILWAUKEE 1, U. S. A.



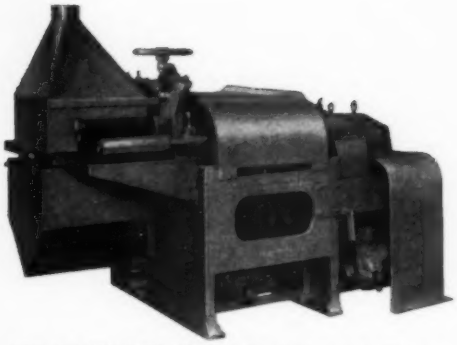
(above) Here is actual view operator has from platform of Allis-Chalmers AD-40, showing how well he can see both ends of the blade and both front wheels.



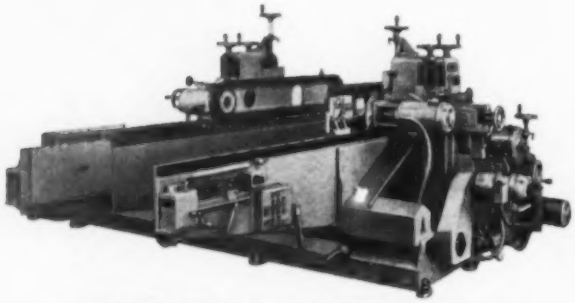
(below) The AD-40 has 104 brake horsepower, 23,000 pounds of weight and tandem drive traction, all it needs to do a better job on heavy duty construction . . . a faster job on maintenance.



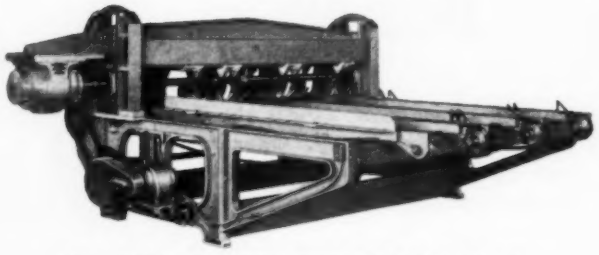
No. 400 DOUBLE-END TENONER—Sizes up to 20' to fit your requirements. Will square-cut up to 96" ahead of trim saws. Several accessories to multiply its usefulness. *Ask for Bulletin No. 400.*



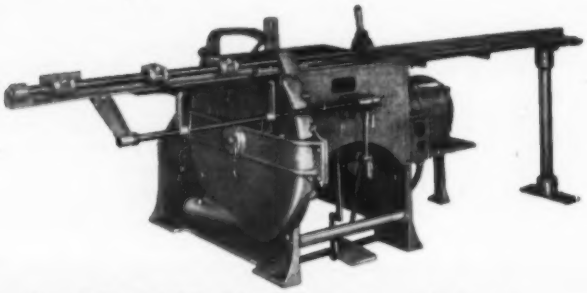
No. 441 GANG RIP SAW—For fast production on the most difficult gang ripping jobs. Six power driven feed rolls...12", 19" or 24" saw space...up to 125 HP . . . variable feed drive up to 300 ft. per minute . . . glue joint accuracy. *Ask for Bulletin No. 441.*



No. 300 DOUBLE CUT-OFF SAW—Accurate production at high rates of feed. Labor saving attachments such as cope motors, dado arbors and other devices are available for specific needs. *Ask for Bulletin No. 300.*

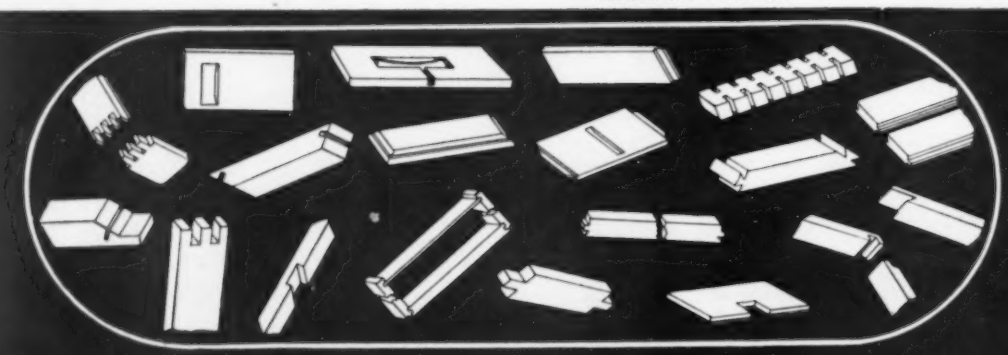


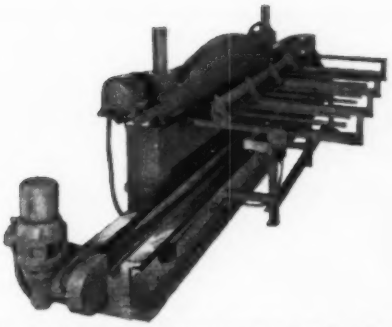
No. 435-H MULTIPLE CUT-OFF SAW—Cuts long boards into short pieces . . . will square cut large size sheets . . . and will cut any number of grooves. It's an excellent plywood sizer. *Ask for Bulletin No. 435-H.*



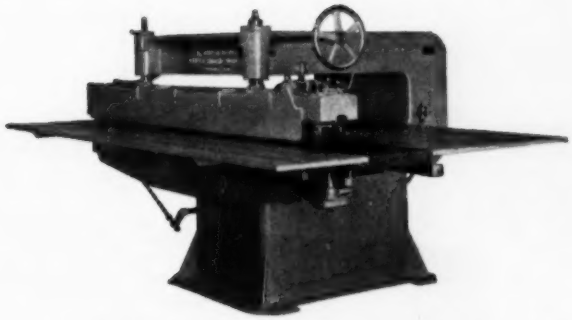
No. 477 CUT-OFF SAW—Capacity equals two or three swing, straight line or roller carriage cut-off saws—depending on the type and condition of the stock. Excellent for box work. *Ask for Bulletin No. 477*

No. 442-MT COMBINATION SAW—Versatile machine for ripping, cross cutting, grooving, dadoing, beveling, mitering. Cuts up to 48" wide and rips up to 50" wide. Easily handles large stock. *Ask for Bulletin No. 442-MT.*





VENEER JOINTER—Traveling head principle eliminates shifting. No chain feed—no "stock wobble". Perfectly joints bundles of veneer up to four inches thick. Sizes from 90" to 212". *Ask for the Jointer Bulletin.*



VENEER SPLICER—Makes precision tapeless joints. Adjusts itself automatically for varying thickness of veneer normally encountered. Welded steel frame with 49" throat clearance at right. *Ask for Bulletin No. 50.*

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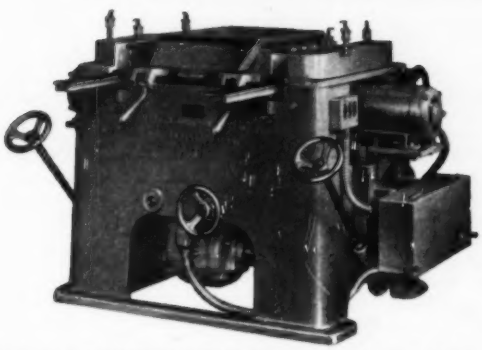
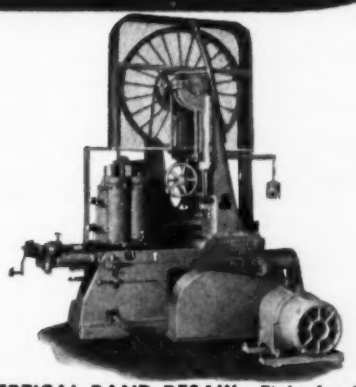


No. 326 MATCHER-JOINTER—For sash and door, furniture and box factories—as well as many special uses. Adaptable for jointing hogshead staves. Unequalled for "T" and "G" work. *Ask for Bulletin No. 326.*



VERTICAL BAND RESAW—Eight feed rolls eliminate "stock wobble". Sizes 48" to 60". Variable feed drive; 100% ball and roller bearings. 54" Twin Band Resaw. Combination band rip and resaw. *Ask for Resaw Bulletin.*

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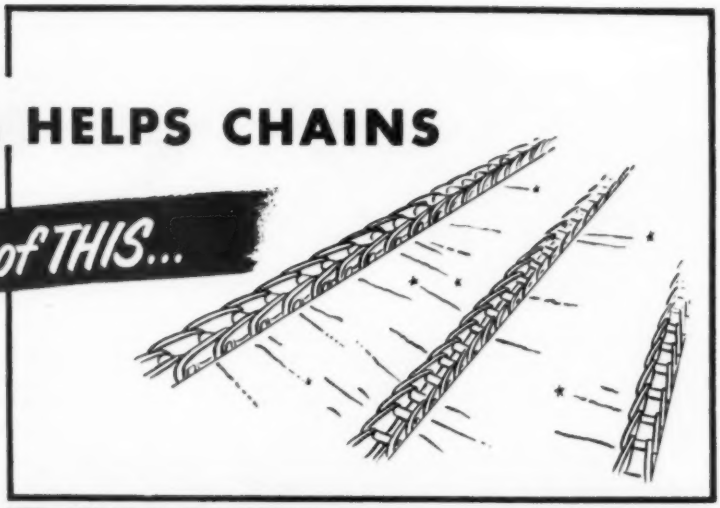

Because of Z-Metal's inherent *hardness*, Z-Metal Chains will stand up under very abrasive conditions . . . will take much more sliding wear than chains of ordinary malleable iron.

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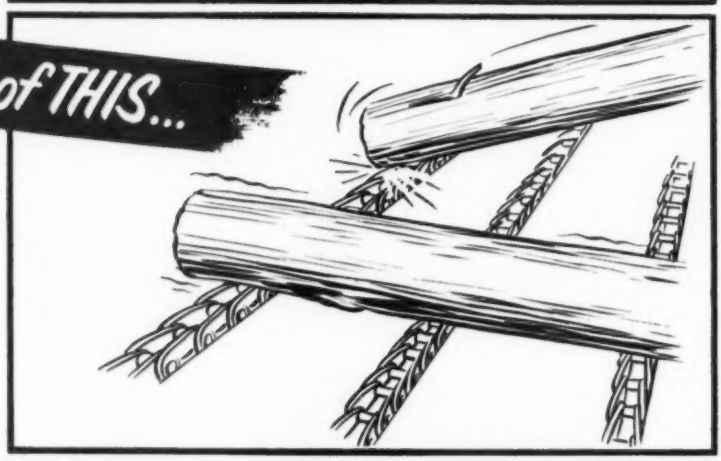


Because of Z-Metal's *ductility* it stands up well under heavy shock loads . . . can take much more punishment than ordinary malleable iron.

Extra strength, added toughness, increased resistance to wear and to corrosion and extraordinary ability to absorb shock loads —you can profit from these added values when you use Rex Chains cast of Z-Metal.

Z-Metal is carefully alloyed metal which combines surface hardness with a fine grained uniform structure. In short, *it combines both hardness and ductility,* qualities never before found together in the same metal. In addition, pins on Z-Metal Chain are heat-treated to assure strength and longer life.

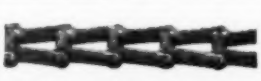
So if you're looking for longer life from your cast chains...more value for your chain dollar, call your Rex Field Sales Engineer. He'll be happy to give you all the details on the Z-Metal story. Or if you prefer, write to Chain Belt Company, 4653 W. Greenfield Ave., Milwaukee 1, Wisconsin.

Average Comparative Mechanical Properties

	Ultimate Strength, Lbs. per Sq. In.	Yield Point, Lbs. per Sq. In.	Elongation in 2 Inches	Brinell Hardness	Fatigue Limit, Lbs. per Sq. In.
Rex Z-Metal.....	75,000	55,000	12%	170-190	37,500
Cast Steel Not Alloyed .20-.30 Carbon.....	70,000	40,000	25%	140-160	33,000
Cast Steel Not Alloyed .40-.50 Carbon.....	80,000	45,000	20%	160-180	37,500
Forged Steel SAE 1035..	75,000	45,000	20%	150-170	37,500
Malleable Iron.....	53,000	35,000	18%	120-140	28,000
Gray Iron (a good grade)	30,000	30,000	None	160-180	.....

Z-Metal Makes These Great Chains Even Better

Rex Z-Metal H-Type Chain —for conveyor or drive service where loads and speeds are moderate.



Rex Z-Metal Pintle Chain for general conveyor and power transmission service where loads are light.

Rex Z-Metal Riveted Mill Conveyor Chain is extensively used for moving chips and refuse in shallow troughs.

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The General Air Spring permits a savings of approximately 300 pounds more than the average steel suspensions. This allows up to *300 pounds more payload.*

★ INCREASES SAFETY

The General Air Spring assures positive braking action. Equal axle loading is maintained while brakes are applied, giving maximum brake effectiveness. No chatter, hop or bounce . . . loaded or empty.

Automatic air pressure control keeps body parallel to axles eliminating heeling over due to misloading, shifting loads or high crown roads.

★ REDUCES MAINTENANCE COSTS

Automatically measured air pressure fits every load condition from maximum to empty. This results in proper riding deflection, maximum spring efficiency.

Bottoming of springs with resulting strain on axles and frame is eliminated.

The absorption of road shocks and high frequency vibration reduces metal fatigue in frame and body.

Rubber mountings require no lubrication, minimum attention.

★ REDUCES OPERATING COSTS

Controlled, easy ride and positive braking action reduces bounces, excess deflection and skidding. Results in more tire carcass life and slower, even tread wear.

Controlled ride reduces cargo breakage. Eliminates high frequency vibration and reduces damage to perishable goods.

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here's that New McCULLOCH

MODEL 4-30

THE 4-30 HAS POWER!

It develops 4 brake horsepower. (McCulloch saws are rated exclusively by accurate dynamometer. You can tell the difference when you put this saw in a log!)

THE 4-30 IS LIGHT!

Weight is only 30 pounds, *complete with blade and chain.* No other saws of more than three horsepower are this light!

THE 4-30 IS CENTER BALANCED!

Balance is evenly distributed on each side of the blade line, for easy, day-long bucking. And the balance is right for felling from either side, and for carrying.

THE 4-30 CUTS AT ALL ANGLES!

The new, filter-protected floatless carburetor gives full power cutting at all angles without adjustment—upside down, right-side up, blade down, blade up, any position the job calls for.

THE 4-30 HAS SPEED!

Equipped with the new exclusive McCulloch Sabertooth chain, the 4-30 really does a job on trees, logs, and pulp. You'll have to see it and try it to appreciate the 4-30's sensational cutting speed.

THE 4-30 IS LOW PRICED!

In the hands of a fast logger in a good show, the 4-30 can often pay for itself in less than a week. Prices start at $325, f.o.b. Los Angeles.

S-3000

some more features of the new McCulloch model 4-30

Automatic clutch . . . Kickproof, automatic-rewind starter . . . Chrome-plated cylinder wall . . . Chrome-plated saber steel blade . . . Chrome-plated handles and safety muffler . . . Built-in oiler . . . Positive chain tension control . . . Accessible ignition points . . . Grouped engine controls, including primer button; no choking required.

see a demonstration at your nearest McCulloch dealer

NATIONWIDE SALES AND SERVICE

chain saw!

IT WILL RAISE YOUR SCALE IN ANY SHOW

McCulloch Motors presents the powerful, light-weight Model 4-30 — a true logger's saw. It's built for fast, steady falling, bucking, and limbing, in timber up to 5 feet butt diameter. The new 4-30 is a saw you can count on for more production. It's manufactured and guaranteed by the world's largest builders of power chain saws, and sold and serviced by factory authorized dealers throughout U.S. and Canada. Wherever you go with your McCulloch saw, you can get prompt, skilled service and factory parts.

McCULLOCH MOTORS

or write direct for literature

McCULLOCH

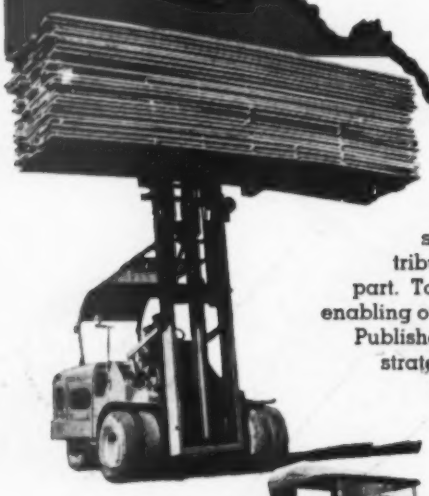
World's Largest Builders of Power Chain Saws

McCULLOCH MOTORS CORPORATION,
LOS ANGELES 45, Calif.
Export Dept.: 301 Clay St., San Francisco 11, Calif., U.S.A.
Canada: 220 W. First Ave., Vancouver, B.C.
525 First Ave., Quebec, Quebec 224 N. George Street, Peterboro, Ontario

Wherever you are... you're not far from...

GERLINGER SERVICE

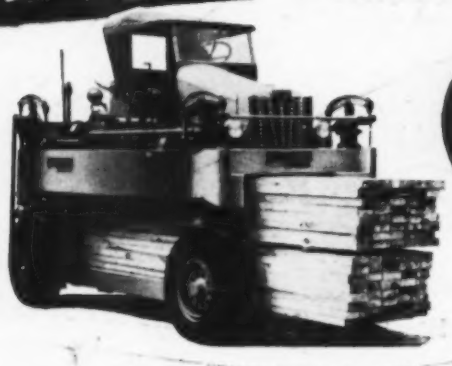
See the Gerlinger Distributor nearest you for complete line of Material handling equipment.



Strategically-located GERLINGER DEALERS and use of Standard Manufacturers' Parts mean quick service and fast parts delivery!

Owners of Gerlinger lift truck and straddle material carriers have found that they can depend upon receiving dependable, courteous service *after* as well as *before* the sale. Wherever they are, a Gerlinger distributor is ready to answer a call for a quick tune-up or a needed replacement part. Too, all Gerlinger parts are listed under standard manufacturers' numbers, enabling owners to secure parts from local outlets if they prefer.

Published here for your convenience is a list of Gerlinger distributors located in strategic localities throughout the United States and in several foreign countries. You'll find that these distributors and their staffs are experts in the material handling field, with experience that enables them to recommend exactly the right size Gerlinger fork lift truck or material carriers for your job.



GERLINGER PRODUCTS

G-319

GERLINGER CARRIER CO., DALLAS, OREGON

GERLINGER DEALERS

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EUGENE D. WILSON
703 Columbian Tower, Memphis 3, Tennessee

ALASKA
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327 Coleman Building, Seattle 4, Washington

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ARKANSAS
EUGENE D. WILSON
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BURNABY & WILLIAMS
6102 Sepulveda Blvd., Van Nuys, California
BURNABY & WILLIAMS
600 Sixteenth St., Oakland 12, California

COLORADO
MURRAY SALES CO.
16 Wazee Market, Denver 4, Colorado

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HARVARD EQUIPMENT CO. INC.
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SERVICE SUPPLY CORP.
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J. E. TARGETT, Agent
82 Ivy St., N.E., Atlanta, Georgia

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AIR-MAC, INC. OF WASHINGTON
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ILLINOIS
(Southern)
CONLON-LIGHTBODY CO.
1931 Olive Street, St. Louis 3, Missouri
(Northern)
MATERIALS TRANSPORTATION CO.
400 N. Michigan Ave., Chicago 11, Illinois

KANSAS
INDUSTRIAL POWER EQUIPMENT CO.
1735 Charlotte, Kansas City 8, Missouri

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MARTIN A. CEDER CO.
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MARYLAND and DISTRICT OF COLUMBIA
VINCES SERVICE CO.
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MURRAY SALES CO.
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BURNABY & WILLIAMS
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SERVICE SUPPLY CORP.
Lancaster, Pennsylvania

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NEW MEXICO EQUIP. SUPPLY
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A. & A. MACHINERY CORP.
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(Southwest)
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2 Crailo Ave., Pittsburgh 10, Pennsylvania
(Eastern)
SERVICE SUPPLY CORP.
20th and Erie Ave., Philadelphia 32, Pennsylvania

RHODE ISLAND
HARVARD EQUIPMENT CO., INC.
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TEXAS
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7131 Navigation Blvd., Houston 11, Texas

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VERMONT
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BEMISS EQUIPMENT CORP.
224 West 4th Street, Salem, Virginia

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AIR-MAC, INC. OF WASHINGTON
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AIR-MAC, INC. OF WASHINGTON
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Louisville, Kentucky
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WISCONSIN
STOWERS & CO.
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WYOMING
MURRAY SALES CO.
16 Wazee Market, Denver 4, Colorado

New Method of Breaking Up Deep Sea Log Rafts

An unconventional way of breaking up deepsea log rafts, using fire, has been developed by Gordon Gibson, of Gibson Bros. Logging Co., Vancouver, and the practice has been followed long enough to demonstrate that it is entirely feasible and a real time-saver.

Gordon Gibson is one of the four brothers who have been active in logging and sawmilling on the west coast of Vancouver Island for years. Recently, they disposed of their sawmills at Port Alberni and Zeballos to East Asiatic Co., but they still carry on logging on a large scale. The Gibson raft which Gordon designed for open-sea towing was described in THE LUMBERMAN some time ago. Its main feature is a removable mat on which the raft is built. Incidentally, the mat originally used for the first raft is still in service.

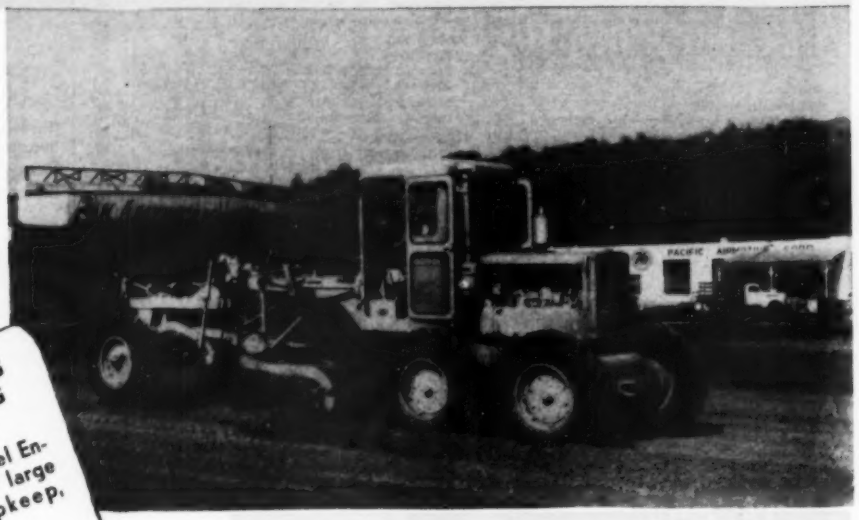
When one of the Gibson rafts, resembling a Davis raft in appearance, is brought into port, there are perhaps 14 steel lines around each section. Instead of gradually removing all the lines, every fourth or fifth line is loosened and the shackles taken out.

Ordinary ¾-inch manila or hemp rope is put in to replace the shackles, being wrapped around six or eight times in the eyes and tied securely. When this is done and the raft is still held together by the temporary rope fastenings, the rope is saturated with kerosene or inflammable oil and ignited. The raft is then broken apart by internal pressure as the rope strands burn.

The somewhat spectacular use of fire to break up rafts has been found a convenient means of eliminating what used to be a cumbersome and sometimes difficult job—unfastening clamps and disengaging steel wire already under severe strain through pressure of the inclosed logs. For the towing operation in open water it would of course be inadequate to use rope fastenings instead of the regular shackles or some other type of steel, but in protected waters where the raft is being held only until breakup, the use of rope has made it possible to hold the raft intact for a maximum of time and to effect disintegration of the whole raft practically simultaneously. The rope makes it unnecessary to use dynamite at any stage of the breakup process.

The average Gibson raft contains about 2,000,000 feet of logs.

"CATERPILLAR" Motor Graders
Keep costs *down to EARTH!*



Caterpillar Diesel No. 112 Motor Grader used at Boeing Field, Seattle, for maintaining roads and aprons.

MILEAGE - MAKING DOLLAR - SAVING FEATURES

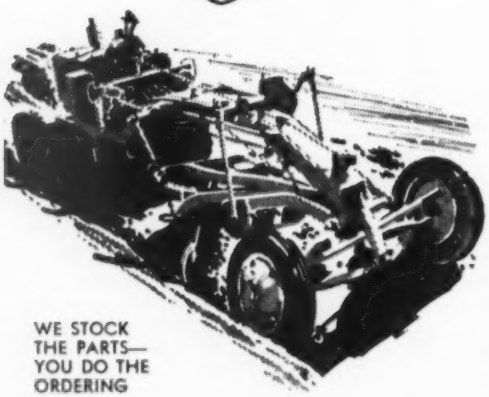
- "Caterpillar" Diesel Engine powered for large capacity, low upkeep, long life.
- 100% "Caterpillar" — Built — 100% "Caterpillar" dealer serviced.
- Constant-mesh transmission for smooth, quiet shifting on the run.

. . . and many more.

"Caterpillar" Motor Graders are powered only by "Caterpillar" Diesel Engines. Right off the bat that promises a long and thrifty working life. "Caterpillar" Diesel Motor Graders are still "at it" after 35,000 hours and more in all kinds of going!

Here's plenty of heavy-duty power for road-building, scarifying, oil-mixing, ditching, terracing, snow-plowing, tough maintenance. All of this on power-rich non-premium fuel!

Make Collins Shop Facilities Your Service Headquarters



WE STOCK THE PARTS— YOU DO THE ORDERING

COLLINS CATERPILLAR SERVICE

REG. U. S. PAT. OFF.

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PORT ANGELES • 306 E. 1ST • PHONE 5115 • • • • MT. VERNON • 907 RIVERSIDE DR. • PHONE 9655

The 1" Tiger Brand mainline on this Skagit SJ-8 Mobile Hoist was still going strong after loading 5 million bd. ft. for G&A Logging Co., Seaside, Ore. The line gets extremely tough service, for SJ-8's, to be mobile, must have small sheaves and drums.

SJ-8's loading line still good after 5 million bd. ft.

Archlines on this "Cat" are also Tiger Brand Wire Rope, which G&A uses exclusively for all types of logging. And it always gives them long life. For example, these archlines were averaging nearly 3 working weeks apiece. All logs at this "side" were yarded by tractor, although the loader also yards when necessary.

Tiger Brand Field Engineers and Representatives are always available to G&A Logging Co. Here a representative, right, checks the SJ-8's mainline with Logging Engr. Lloyd Phillips, who says: "Despite small drums and sheaves, our Tiger Brand mainline has given us unusually long service. There's nothing better."

For any lumbering job you handle, rely on tough American Tiger Brand, the wire rope that's rigidly controlled by United States Steel from raw ore to finished product. To get all the stamina engineered into it, you're welcome to the services of a Tiger Brand Field Engineer. Contact your local distributor or write to Columbia-Geneva Steel, Room 1403, Russ Building, San Francisco 6.

USS

U·S·S TIGER BRAND Wire Rope

Columbia-Geneva Steel Division, United States Steel Corporation, San Francisco

UNITED STATES STEEL

Does
the wire rope
you use win this
kind of praise?
"I have preferred Hercules Red-Strand wire rope since 1909," says an operations superintendent. "I just wouldn't use any other." Another operator reports a truly remarkable record: "Red-Strand outlasted any other rope by three times!"
HERCULES Red-Strand earns it
Why do these men, among others, praise Red-Strand so highly? In a few words, it's because higher-than-rated quality in Red-Strand wire rope means longer-than-expected service . . . year in, year out.
Next time, use Hercules Red-Strand. You'll experience the difference too.
HIGHER-THAN-RATED QUALITY
LESCHEN
WIRE ROPE
AND SLINGS
A. LESCHEN & SONS ROPE COMPANY
HERCULES Red-Strand wire rope made by A. Leschen & Sons Rope Company, St. Louis 12, Missouri
In business only to make wire rope better wire rope . . . since 1857
DISTRIBUTORS IN ALL PRINCIPAL CITIES

Saw Filing in Japan

By YUKI YOSHIDA
Hiroshima, Japan

I have filed for three mills in this city since I started filing. I used to file for two mills, going from one to the other, but at present I am filing for one mill. Someone still wishes me to file his saws, but I do not like to do such a big job and will not do it for the time being even if I can, for I need more time to study English as well as filing.

Our mill is equipped with one 4' band head mill, one 42" table band resaw (man power feed) one small rip and cross-cutting circular saw. The head mill carries saws of 21-19 gauge, 6" wide and 26' long. Saws of 20 gauge and 4" wide are used on the table band mill. We bought a new 42" roller-feed band resaw, on which we are planning to carry 21-23 gauge, 5" wide bands.

I file and will file with no helper these saws including several hand saws. Our mill is one of the largest mills in this city and is known as the mill where the largest timber in this city can be cut. The largest timber ever cut in this mill was 50" in dia., but usually the timbers here are less than 36" in dia. The feed is not so exceedingly high as that in American mills. We feed about four inches per revolution of the saw in 12" cut. This is the maximum speed of the carriage.

My saws, especially the head saws, carry so much tension that they don't lie flat on the bench with their own weights. My way of tensioning, however, is different in a point from that of others, which I'll be glad to tell if you are interested. I keep watching my saws with close observation and try to make them better.

Heat-tensioning is one of the subjects in which I am keenly interested. Filers and any concerned men in this country have never done it nor even know they have such a method for retensioning in the United States. Another thing I am interested in most, is saw welding which is not practically used in this country. I think these two arts should be taken into this country as they mean a great deal of efficiency and savings to mill owners and time and labor savings to filers. At present I am trying to study saw welding, which I am planning to use in my filing room.

I often think how wonderful it would be if in some way it would be possible for me to visit the United States to study and experience things as worthy to be brought back and applied in this country.

There's an RCI

RESIN or PROTEIN ADHESIVE

for Every Gluing Job!

That's a sweeping statement but it's true!

Whether you manufacture plywood, furniture, or wood waste utilization products, Reichhold can provide you with the right resin or protein adhesive for your needs.

Moreover, when you buy from Reichhold, you receive attentive counsel from a nation-wide technical service staff that is thoroughly familiar with the problems you are facing.

Get acquainted with Reichhold's complete line of quality glues and avail yourself of Reichhold's expert technical advice. Then you'll begin to understand why RCI is one of the fastest growing firms in the chemical field.

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Synthetic Resins • Chemical Colors • Phenolic Plastics
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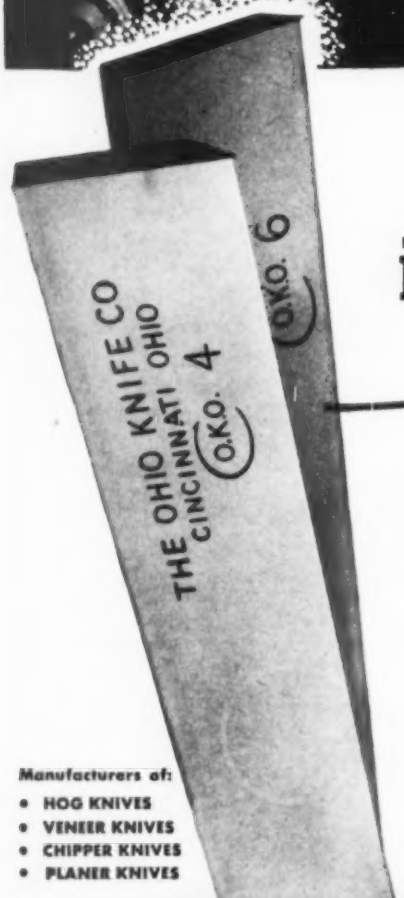
High production planing with OK Knives at Farrin Lumber Co., Cincinnati, Ohio



it's OK let'er go!

and watch OK THIN HIGH SPEED PLANER KNIVES deliver perfect finishes on your toughest jobs.

These are the favorite knives of mills all over the world:

OK No. 4 is a special type of high speed steel designed to withstand the heat of fast, heavy feeds on rough, knotty, sandy lumber and still hold a keen edge on long runs.

OK No. 6—made of a specially developed chrome steel—is designed for mills working in soft, green wood.

Specify Ohio Knives and enjoy the superb performance that results in high production at a lower cost.

Manufacturers of:

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- CHIPPER KNIVES
- PLANER KNIVES

GO WITH OHIO GREEN

THE OHIO KNIFE CO.

CINCINNATI 23, OHIO

FOR

Efficient

TRACTOR LOGGING...

LOGGERS DEPEND ON CARCO WINCHES

REGARDLESS OF YOUR TERRAIN or your timber size, the right combination of a Carco winch and tractor will increase yarding efficiency on any tractor logging show. On any tractor, new or old, a Carco winch doubles tractor pulling power. This means bigger loads or faster turns. Both result in increased production. And, a Carco winch increases tractor "reach" . . . enables you to recover logs from spots where tractors can't go.

Carco winches, for years, have had an outstanding record in the woods, because back of every Carco winch is the widest field experience of any winch manufacturer. Carco has pioneered many engineering "firsts" in winch design and performance.

There's a Carco winch . . . or hoist . . . designed to meet every logging need . . . one with the right drum capacity, line speed and line pull for *your* operation. And, there's a Carco winch, too, engineered for every make and model of industrial tractor.

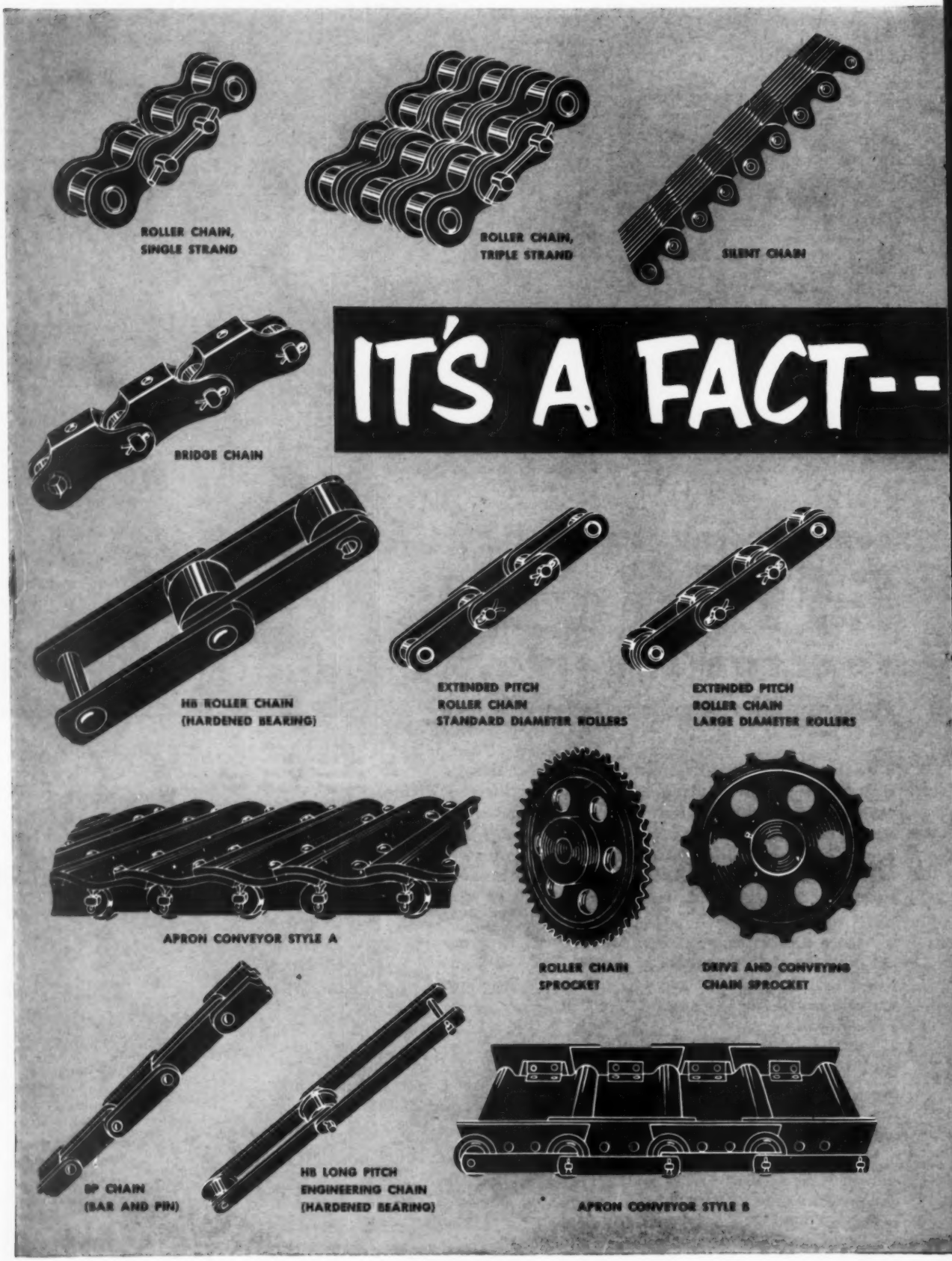
You can expect greater value from the leading producer, and get it from Carco, first in winch production. PACIFIC CAR AND FOUNDRY COMPANY, Renton, Washington. Branches at Portland, Oregon, and Franklin Park, Illinois.

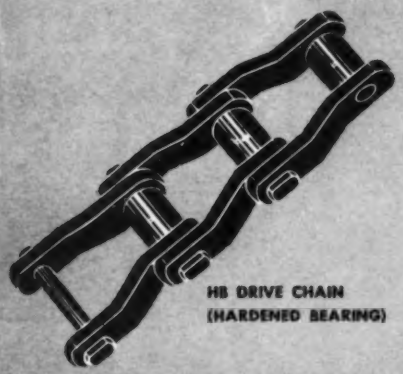
Upper: *The new Carco A winch and tractor is a versatile rig. Add a swivel fairlead and you can winch logs from any direction.* LOWER: *Plate clutch gives a smooth line pull, which with lowering brake makes winch ideal for loading.*

Lugs on top and bottom of new Carco A winch provide for use of tie rods for easy attachment of couplers, booms and fairleads. Swivel fairlead, at extra cost, can be used on tractors providing clearance above winch.

CARCO

WINCHES *FOR ALL INDUSTRIAL TRACTORS*


ROLLER CHAIN, SINGLE STRAND
ROLLER CHAIN, TRIPLE STRAND
SILENT CHAIN
IT'S A FACT--
BRIDGE CHAIN
HB ROLLER CHAIN (HARDENED BEARING)
EXTENDED PITCH ROLLER CHAIN STANDARD DIAMETER ROLLERS
EXTENDED PITCH ROLLER CHAIN LARGE DIAMETER ROLLERS
APRON CONVEYOR STYLE A
ROLLER CHAIN SPROCKET
DRIVE AND CONVEYING CHAIN SPROCKET
BP CHAIN (BAR AND PIN)
HB LONG PITCH ENGINEERING CHAIN (HARDENED BEARING)
APRON CONVEYOR STYLE B



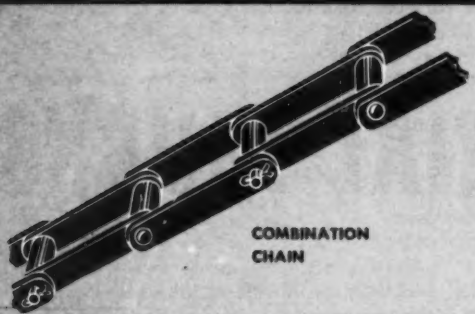
HB DRIVE CHAIN
(HARDENED BEARING)

THERE ARE 404 CHAINS LISTED IN OUR CATALOGS AND PRICE LISTS

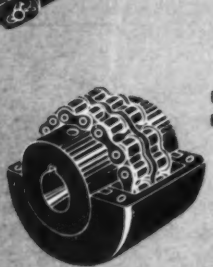
. . . and we will recommend the best one for your job . . .

It doesn't matter to *us* which power transmission or materials handling chain is best for your job but it does to *you*. For almost invariably there is one chain which will perform best and last longer on a given application. And that's the chain we'll recommend. We'll recommend it because we make it.

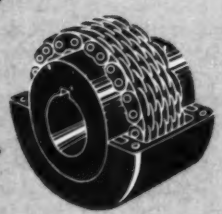
The thing to remember about UNION is that UNION makes every type of steel chain and attachment for the transmission of power and the mechanical handling of materials. (And nothing else, incidentally. We're complete chain specialists.) So you might well wish to put your next chain assignment in our hands. If you do, you'll get prompt attention from a UNION representative (see list below) or from the home office. *The Union Chain and Manufacturing Company, Sandusky, Ohio.*



COMBINATION CHAIN



ROLLER CHAIN
FLEXIBLE COUPLING



SILENT CHAIN
FLEXIBLE COUPLING

WRITE FOR OUR CATALOGS

UNION CHAIN REPRESENTATIVES

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Huntington Park, Calif.
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Charles A. Fowler
809 Bryant
San Francisco 3, Calif.
Phone: Underhill 3-5810

GEORGIA
H. F. Edge
Walton Bldg.
Atlanta, Ga.
Phone: Alpine 3241

ILLINOIS
Union Chain & Mfg. Co.
A. C. Mohr, William R. Albrecht
Bradley N. Nelson
53 W. Jackson Blvd., Rm. 1232
Chicago 4, Illinois
Phone: Wabash 2-3886

INDIANA
Paul W. Huddleston
5745 Guilford Ave.
Indianapolis 20, Ind.
Phone: Broadway 1341

KENTUCKY
Fred W. Borrow
1218 Summit Drive
Lexington, Kentucky
Phone: 43820

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New Orleans 15, La.
Phone: Audubon 1364

MASSACHUSETTS
Transmission Engineering Co.
Stan Johnson
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Newton Highlands 61, Mass.
Phone: LaSalle 7-2822

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Basso Bldg.
Detroit 2, Michigan
Phone: Trinity 3-3325

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490 N. Snelling Ave., Rm. 671
St. Paul 4, Minnesota
Phone: Nestor 6575
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F. H. Dalrymple & Frank Smiley
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Cleveland 13, Ohio
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Phone: Empire 1131

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SPECIAL REPORT

THE VETERAN EDITOR OF THE LUMBERMAN, W. E. CROSBY, HERE REPORTS TO READERS DIRECT FROM WASHINGTON, D. C., ON THE RESULTS OF INTERVIEWS WITH HIGH-LEVEL OFFICIALS, COVERING SUBJECTS OF VITAL INTEREST TO FOREST INDUSTRIES MEN EVERYWHERE

MAJOR EVENTS AFFECTING THE FORESTS and forest economy of the United States are shaping up in Washington, D.C. In order to obtain at first hand information on these important developments, the editor of THE LUMBERMAN, accompanied by the Atlantic staff editor, spent several days at the national capitol in late March. The information gained was not hearsay or back-stage stuff but came frome the very highest-ranking department heads concerned with the managemnt and administration of the vast federal timberland holdings.

Personal interviews were held not only with Ezra T. Benson, Secretary of Agriculture, of which the U S Forest Service is a major division, but also with Douglas McKay, Secretary of the Interior Department, of which the Bureau of Land Management, the Indian Service and the National Park Srvice are major Divisions.

In addition to these contacts interviews were held with important bureau chiefs, congressmen, senators, and other government agencies interested in the management of the vast federal timberland holdings, and industry representatives. In no instance were the interviews merely "go in, shake hands and leave" contacts. In every instance the top government officials frankly discussed many forest and forest industry problems now confronting the new administration.

In this report of THE LUMBERMAN's study in Washington, public officials will not be quoted directly. To do so would not be in good taste nor do we wish to violate the confidence of these interviews. The views and conclusions presented are our own. We believe that they reflect an accurate picture of the situation as it existed in late March.

MINIMUM OF FEDERAL CONTROL

First, it can be stated that Secretaries Benson and McKay, are doing their utmost to place in important appointed positions men of high caliber and ability and men who will see eye to eye and cooperate fully with the new administration's program. They want the various forest agencies under their direction to function as the Congress intended. Also it can be stated positively that the thinking at top levels is that the basic policy is to have these forest agencies administer their trusts in the best public interest and yet at the same time meddle as little as possible with normal business and industrial activities. It can also be said they want these agencies to impose over private industry the very minimum of restraint, controls and regulations and cease using bureaus as propagandizing agencies.

The problem of placing high-caliber men in high appointed positions can likely be resolved without too much difficulty, but there is a problem, not so easily solved, because of civil service, when it come to naming Bureau chiefs and other administrative officials. There appears to be no desire to transfer key men out of such positions if it is felt that such men will be 100 percent loyal to the new Eisenhower administration and willingly and cheerfully join the new team.

AGENCY CONSOLIDATION

One of the major problems facing both the Department of Agriculture and the Department of the Interior right now is the movement looking toward the consolidation of the federal timberland-owning and management agencies. This was suggested in the Hoover report and steps are now in progress looking toward the implemention of the idea.

The merger idea of course is not new. It has been suggested a number of times. The stumbling block has been who should merge with whom. The Department of Agriculture in the past has been unwilling to turn over its Forest Service to Interior, and the Interior has been unwilling to turn over its Bureau of Land Management, its Indian Service, (which by the way last year yielded over 700,000,000 feet of cut lumber) and its Park Service, (which owns vast stands of timber but which by law cannot be cut) to the Department of Agriculture.

Both departments are understandibly jealous of their respective timberland administrative agencies and the same tremendous pressures which have prevented a merger in the past, will unquestionably exert all the influence possible one way or the other in the present merger effort. In this instance, however, it should be kept in mind that the idea stems from the Hoover recommendations which carry much weight. In any event the decision, like most decisions, seems invariably to rest with the Congress and President Eisenhower.

There is much to be said in favor of a consolidation, mainly as to elimination of overlapping and duplicating activities. The economy angle is a major factor. On the other hand there are many who feel no great economies would be affected and that the competitive features exert a healthy influence in all agencies.

OLYMPIC PARK TIMBER

Another matter affecting the forest and lumber situation in the Pacific Northwest that is now shaping up is the renewed effort to make it possible to horvest some of the standing timber now locked up in the 900,000-acre Olympic National Park. The feeling in high levels for the most part is that there is too much timber locked up. A report from Washington's Governor Langlie is now being awaited in Washington. He is expected to make some specific recommendations as to what may be done and as to what areas might be withdrawn from the big park, and which may in the future be logged on a sustained yield basis to provide raw material to maintain the forest economy of the region. It is admitted that such legislation by Congress will be vigorously opposed but those interested feel there may be a chance.

One thing of course that delays the initiation of some of the contemplated program is the matter of budget, which in late March had not been approved. This is an economy-minded administration. All departments apparently have been asked by the President to cut down

(Continued on Page 114)

LEFT—BILL WALDIE, W. T. Waldie & Sons, Ltd., Castlegar has a radio telephone in his office to contact camp operations. Waldie's company is now a part of the vast Celgar Development operations at Arrow Lakes. RIGHT—An operator at the office of Kootenay Forest Products, Nelson, B. C., listens for radio calls from the company's logging camps and tugboats on Kootenay Lake.

Great Gains Noted in Radio Use In Rugged B. C. Logging Regions

Estimate of the number of logging organizations in British Columbia using radio regularly is over 200. Successful communication in remote areas proves highly useful in sustaining production

Two-way radio communication may have got a slow start in British Columbia, but it's spreading now like a crown fire in July.

Six years ago only one company had installed a mobile two-way system to enable logging truck drivers to talk to the dispatcher in camp. Today there are more than 350 two-way radio sets in operation in the logging industry of the west coast province, in addition to some 300 point-to-point radio sets installed to connect with the regular telephone system.

It is estimated that more than 200 logging organizations in British Columbia are now using radio regularly as a means of communication in one form or another. Officials of the transport department acknowledge that the use of radio in the woods has been one of the most spectacular phases of recent development in that field.

Most of the equipment currently in use in the logging industry has been supplied by Spilsbury & Tindall Ltd., which represents Comco equipment, manufactured in Coral Gables, Fla., as well as other companies; General Electric, Motorola (Rogers Majestic in Canada) Marconi and RCA Victor. Most of the mobile units have been installed by GE, with Comco probably second.

Vast Distances Pose Problems

The rugged terrain of British Columbia's typical logging country and its relative remoteness from centers of population have been factors contributing to the rapid expansion of radio use, and they were also responsible for the delays encountered in the original adoption of the system. One of the biggest companies in the industry has been unable to install a satisfactory setup even now because of the vast distances and the rough country involved.

The largest user of two-way radio is probably MacMillan & Bloedel, which was the first to introduce radio as a means of contact between driver and dispatcher and truck to truck at its Northwest Bay division in 1946. Other truck logging divisions of this company—Shawnigan, Sarita River, Sproat Lake have 25 mobile sets, and more are being put to use as in the swings to increased use of trucks.

Canadian Forest Products is another big user of portable radio, especially at Nimpkish Lake where a rail and truck operation are maintained. About 35 sets are in use there to maintain contact between logging trucks, locies, lake towboats and headquarters at Englewood.

Locomotive Radios Found Useful

Comox Logging & Railway Co. has been using radio on its truck and rail network east of Ladysmith and in the Nanaimo Lakes district for several years. A specially built two-way

COVER PHOTO

PUSHING THROUGH A NEW LOGGING ROAD. When logging operations closed down for the winter on the Union Lumber Co. show out of Fort Bragg in California's Mendocino County, the road crews went right on working. The cover picture shows blasting on a road into the company's Big River timber holdings. Herb Fraser is road supervisor and he expects to get the job finished this spring. (Photo by permission of The Noyo Chief, Union Lumber Co., Ft. Bragg, Calif.)

LEFT—A speeder operator on the Nimpkish Lake log run talks with headquarters. Installation is on the cab's wall. CENTER—BOB BOYD, British Columbia forest ranger at Manning Park on the Hope-Princeton Highway, finds his radio indispensible as a means of covering the vast area of timberland under his control. RIGHT—Locie operator on the Nimpkish log haul of Canadian Forest Products uses his mobile radio to converse with Englewood base.

radio set is being operated in cabs of main line locomotives on the Nanaimo River where Comox and MacMillan & Bloedel jointly operate the railroad and this enables the two companies to communicate. The radio sets in Comox and Nanaimo River locomotives eliminate the necessity for many miles of telephone wire and hundreds of poles.

Alaska Pine & Cellulose and its subsidiary Western Forest Industries have two-way radios in use on their scattered operations on Vancouver Island, and so has B. C. Forest Products with camps in the Renfrew district, near the southwest corner of the island and in the Cowichan country.

Helpful in Rafting Logs

Many smaller companies employ radio effectively and for special reasons. Squamish Towing & Contracting Co., which takes out timber near the head of Howe Sound, uses radio as a means of keeping in touch with its logging camp up the Squamish river and towboats and trucks between camp and Squamish. The river is subject to rapid fluctuations in depth, and logs can be safely brought down only about sixty days in the year. Radio keeps the skipper of the tug informed as to the state of the water when he starts out with a raft and when, as sometimes happens, the tug runs aground, radio notifies one of the trucks to hurry down and help pull the vessel into deep water again.

At Larson Logging Co.'s camp near Harrison Lake two-way radio was used in the opening up of an important setting no means of access was in existence. Kootenay Forest Products, formerly Glacier Lumber Co., at Nelson covers Kootenay Lake with its two-way system, keeping contact with its logging camps and lake boats as well as with the mill. A special frequency had to be employed in this instance owing to the unusual conditions encountered.

Most Mobiles on Pickups

One estimate is that about 75 percent of the mobile units in the logging industry are on pickup trucks, 25 percent on logging trucks.

In addition to the independent radio installations where provision is made merely for communication between truck and dispatcher or from one camp to another, there is the regular hookup with the government and private telephone systems. Companies with this connection are able to provide facilities whereby a logger stranded on an isolated logging road could call direct to the factory in Seattle or Vancover and get repair instructions or order parts.

MacMillan & Bloedel estimates that the average radio installation in company trucks and other vehicles is $850 each. Each central station costs about $1,300, depending on location and the number of remote controls needed.

Although installations in British Columbia slowed up slightly last summer owing to the forest industry strike and drought, a revival of activity is anticipated this year.

"We couldn't do without it," said one Vancouver Island logging foreman. "I sometimes wonder how we used to get along."

Alaska Company Holds Conference

Managers, administrators and key men of the Columbia Lumber Co., met at the Baranof Hotel, Juneau, Alaska, recently for a company conclave. This was the third annual meeting of this kind. Problems relating to the operation of the company's various units were discussed and plans for 1953 operations presented. The conference was concluded with a banquet. Among those in attendance were the following:—

From Juneau—T. A. Morgan, president; B. D. Stebbins, chief accountant for Columbia Lumber company; Norman Sommers, chief accountant for Alaska Plywood Corporation; G. E. Hamilton, manager; Tongass Timber Company; Freeman Butler, manager, Juneau Lumber Company; Leslie Hogins, manager of Juneau retail yard, Columbia Lumber Company; A. B. Phillips, public relations director; Merwyn Rice, superintendent of Alaska Plywood Corporation; Leslie Hogins, Jr., assistant manager, Juneau retail yard, Columbia Lumber Co.; Cliff Robards, sales manager; Howard McLean, assistant accountant, Columbia Lumber Company.

From Seattle—Roy C. Avrit, vice president, Columbia Lumber Company. Al Besancan, sales representative Columbia Lumber Company.

Others—Stanley M. Johnson, manager of sawmill at Whittier; Cecil Gould, manager of sawmill at Sitka; Ray Chisholm branch manager retail yard, Anchorage; Cecil McClain, branch manager retail yard at Fairbanks; Frank Crosby, branch manager retail yard at Sitka; Gardner Gamwell, vice president of Savage Lumber and Manufacturing Company of Seattle; W. H. Scates, D. K. McDonald Company, Seattle.

Chas. Burdick assistant regional forester, Juneau.

Weyerhaeuser Development

NEW 'PLY-VENEER' BOX SHOWS STRENGTH AND VERSATILITY

The newest thing in the wood products utilization field is Weyerhaeuser Timber Co.'s "Ply-Veneer" shipping container. In fact, it is so new that it is believed this announcement is among the very first to be made to industry. This combination of Kraft paperboard, Douglas fir veneer and wooden cleats to make up a light-weight, strong practical container is simply explained in the accompanying photographs.

This new product is being made at the Weyerhaeuser Timber Co.'s closely-integrated Springfield, Ore., plant in the lumber division, managed by Jon R. Titcomb. Approximately 50 men will be employed in this section, first of its kind anywhere in the U. S.

Has Many Uses

Three different separate contributing units are represented in the production of the containers. First there is the Springfield pulp division, which supplies the Kraft containerboard; next the plywood plant at Springfield, which produces the Douglas fir veneer; and last, the box-shook plant of W. T. Co., Klamath Falls, Ore., providing the cleats.

Ply-Veneer combines ruggedness with light weight and long life and is well-suited for shipping fresh fruit and vegetables, ammunition and explosives, meat and meat products, small metal parts, cheese, butter and various air cargoes.

Container 'Gap' Filled

Researchers at the Weyerhaeuser development center, Longview, Wash., conceived the idea four years ago. They explain that Ply-Veneer fills the gap between fiber cartons and wooden boxes. Clark C. Heritage, director, says,

"With an unparalleled veneer treatment for flatness and stability, Ply-Veneer has all the advantages of wooden boxes *and* of corrugated fiber cartons without perpetuating some of their disadvantages. Ply-Veneer retains the stiffness and resistance to crushing of wood, plus the toughness, impact resistance, strength, light weight and smoothness of fiber containers. The result in an easily handled container substantially more rugged than any other on the market today.

Carries Ice Well

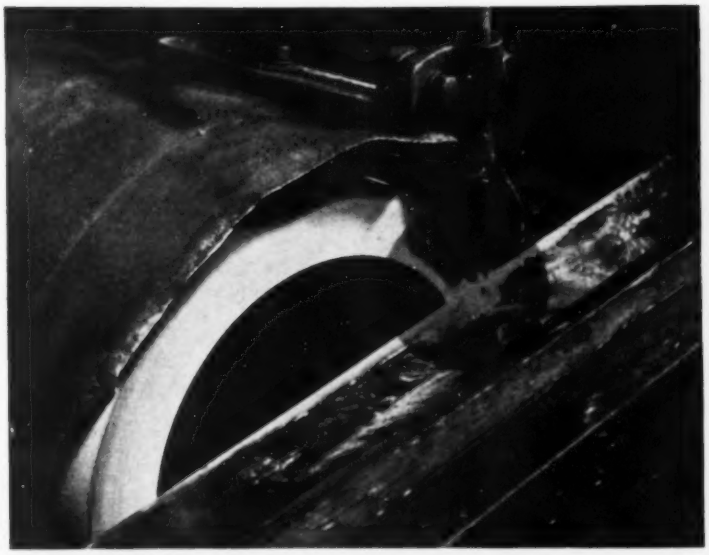
"It's stacking strength, gapless and slitless construction, and low-bulk factor for reshipping in 'knock-down' bundles are also to its credit. Ply-Veneer is remarkably water and moisture resistant and it performs well as a cold-storage container."

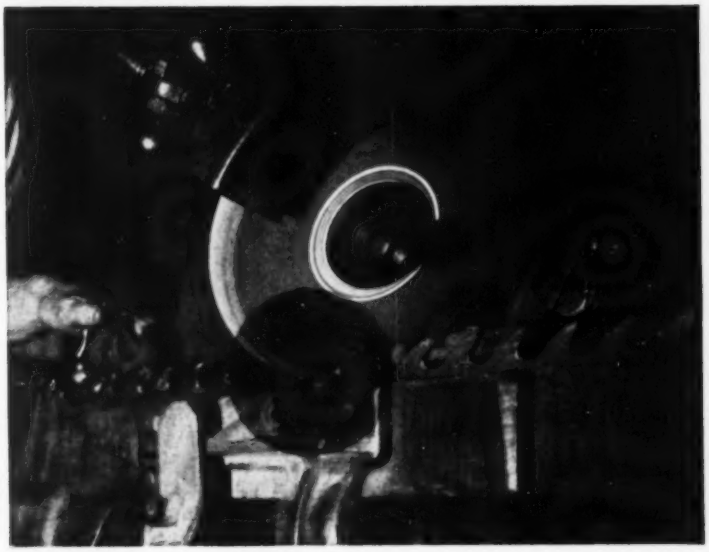
Weyerhaeuser development men most active in bringing Ply-Veneer from its research stage to regular production are R. D. Pauley, former development center manager who is now manager of the company's special products division; J. R. Roberts, development center manager; A. M. Fisken, project engineer; A. S. Gregory, assistant manager of the development department; J. L. Sheridan, process engineering section chief; and C. C. Clapp, company project engineer, whose design of special combining machinery makes possible a continuous and economic

(Continued on Page 112)

SIMPLE BUT EXTREMELY STRONG is the new "Ply-Veneer" used to make the Weyerhaeuser shipping container. Above Product Engineer John Crosby of the Longview development center displays the ingredients of Ply-Veneer, which are two sheets of Kraft containerboard and a central layer of Douglas fir veneer. Steel strips are inserted under the outer layer of containerboard to make for greater nail-holding ability on the wooden cleats.

REVOLUTIONARY new shipping container developed by Weyerhaeuser's development engineers is shipped flat to the customer and is then folded together. These containers have undergone rigid tests and have gained acceptance among potential users who saw Weyerhaeuser men demonstrate them throughout the country. Holding the container here is Nona Taylor of Tacoma.





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As a result, Norton wheels made with the new G Bond cut freer, cooler and faster and do more work per wheel — advantages that mean better results, for less money, on every sharpening job.

Ask your Norton distributor

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Western Pine Meeting

OUTLOOK IS OPTIMISTIC; BUGS BIGGEST PROBLEM

A high note of optimism for the pine lumber industry was sounded at the annual convention of the Western Pine Association in San Francisco last month.

Said Walter S. Johnson, president of the group, and also president of American Forest Products Corp., "We figured that the demand for lumber in 1952 would be about 15% off from 1951. Instead of that there was a 1½% increase in consumption. Now 1953 looks just as good as 1952."

As far as lumber prices go, Johnson said that a few scarce items have gone up in price but there are no general prices rises in sight due to removal of controls.

"In the main, prices are below ceilings," said Johnson, "and we have every reason to believe that a more realistic price structure will be established as a result of a free market, but I think these prices will be below the former ceilings. Three quarters of the lumber produced will not be affected by removal of controls."

Three Primary Problems

It was pointed out at the convention that western pine lumbermen have three primary problems: (1) bugs, (2) government "bungling" and (3) competitive products.

Johnson pointed out that President Eisenhower himself has declared for a policy of cooperation between government and private industry to develop and conserve our forest resources. But so far, instrumentation of the policy has been disappointing, according to Johnson.

Essence of this situation, Johnson said, is that the government owns 90,000,000 acres of timberland in the western pine region and that it is not utilizing that timberland anywhere near up to its productive potential.

The speaker pointed out that a virgin forest barely holds its own, but an economically harvested forest should produce at least 500 feet of new timber per acre per year.

The government acreage is at present contributing not more than 50 board feet of timber per acre per year, according to Johnson. And that's not the way to greater forest resources or greater productivity, he emphasized.

Industry Roads Cheaper

We could be growing more timber in the West than we are consuming if the government would make these lands available, said Johnson.

The speaker said that he thought access roads to government timber should be built by private industry, rather than by the Forest Service. He said that it can be done much cheaper by industry. An example was pointed out where the government figured it would cost $380,000 to build a forest access road, but the logging concern that was going in to get the timber estimated that it would cost only $80,000.

Ralph R. Macartney, Weyerhaeuser Timber Co., president of the NLMA, former president of the Western Pine Association, spoke on the research work done by the lumber industry. He pointed out the outstanding example of Timber Engineering Co. TECO), as to how research can pay off. Macartney said that some $900,000 had been invested in research, some $3,000,000 in sales promotion, and that this has resulted in the sale of three and a half billion feet of lumber.

Experiments in Lamination

Carl A. Rassmussen, director of the association research laboratory, told of experiments with a new laminated sheathing panel. He also told how 12% of the budget of the laboratory has been devoted to research on finishing lumber. He said at the present time they are working on a pigmented knot sealer.

Much experimentation is being done on the seasoning of associated

OFFICERS OF THE WESTERN PINE ASSOCIATION FOR 1953—Left to right—GEORGE L. BARKHURST, Michigan River Timber Co., Laramie, Wyo., first vice president; C. T. GRAY, Stockton Box Co., Stockton, Calif., treasurer; U. R. ARMSTRONG, Hallack & Howard Lumber Co., Winchester, Ida., newly elected president; A. B. HOOD, Ralph L. Smith Lumber Co., Anderson, Calif., second vice president; WALTER S. JOHNSON, American Forest Products Corp., outgoing president; and S. V. FULLAWAY, Jr., secretary-manager.

LOUIS BODINE, executive vice president, National Lumber Manufacturers Assoc.; A. R. DEWEY, Edward Hines Lumber Co.; RAY BERRY, Scott Lumber Co.; H. F. ROOT, Lumber Division, Anaconda Copper Mining Co.; RALPH R. MACARTNEY, Weyerhaeuser Timber Co.

species. Testing of white fir and spruce is being done, for flooring. Rasmussen said that half of the research program is being devoted to finding better production methods—how to get more out of the log and board. He said that as improvements are made in glues, there will be greater utilization of the lower grades of lumber.

CHARLES GILLETT, American Forest Products Inc.; W. H. NELSON, H. F. DOMHOFF, both of Acorn Lumber Co., Pittsburgh, Pa.; PHIL CREDEN, Edward Hines Lumber Co.; E. L. McGRAW, Sierra-Cascade Pine Co.

Bug Control Program Organized

"Virgin forests constitute one of the big problems in bug control," said Ernest L. Kolbe, chief forester of the association. "When a tree reaches maturity, nature begins to weaken it so that it's prime prey for pests and disease."

"Right now," Kolbe said, "some 588,000,000 board feet of spruce in Montana and Northern Idaho is infected with spruce beetle. And the infection is threatening six billion feet of timber."

Kolbe said that the industry has organized a control program, involving emergency harvesting of infected trees.

"We've got too many over-ripe trees and we've got to cut them," said Kolbe. "For today bugs are killing eight to ten times more of our western pines than are taken by fire each year."

LEE MOFFETT, American Forest Products Corp.; W. E. GRIFFEE, Palmerton Lumber Co.; C. O. GRAUE, Potlatch Forests Inc.; L. J. CARR, Sacramento Lumber & Box Co; E. H. LOVENESS, Loveness Lumber Co.

Wants More Education

S. V. Fullaway, Jr., secretary-manager of the association, told the group: "Management must devote the time and assume the cost of educating its employees as to the very real merits of our free enterprise system. In large part his is a matter of developing a better understanding of economic principles. A means to this end, and a most effective measure is to make available to your employees material which deals primarily with simple economic facts and the free enterprise system. The association's mailing service to member employees is one way to accomplish this."

W. E. Griffee, assistant secretary-manager of the association, told of the work of the association during 1952, and he pointed out that $1 out of every $12 spent in this country went for building materials.

He said that millwork manufacturers are enjoying a good business, and that shop lumber business was also good. He said that the shop lumber picture might not be so bright later on in the year.

The volume of lumber that went into box stock was as great in 1952 as it was in 1951, in spite of tough competition, but there may be a rough situation ahead.

Strides Made in Management

Charles Gillett, managing director, American Forest Products Industries, Inc., told of the strides private industry was making in forest management. However, he said that the general public does not know about this progress, and it should be told about it.

C. O. Graue, Potlatch Forests, Inc., chairman of the grading rules committee, said that it had been decided to poll the 318 member mills of Western Pine Association to see whether they wanted the Douglas fir, larch, and hemlock lumber they were cutting graded under WPA or WCL rules. The vote came back that the operators preferred this lumber to be graded under WPA rules, and that the WPA should provide men trained in grading this type of lumber.

Shown at the meeting was the association's new color and sound movie "Bounty of the Forest" which will be shown for promotion purposes before schools, clubs, and other public gatherings. L. J. Carr, Sacramento Lumber & Box Co., chairman of the promotion committee, told of the making of this movie, which was done by Gene K. Walker Productions, San Francisco.

Lee Moffett, American Forest Products Corp., chairman of the research committee, told about the new glued-up utility sheathing panel developed in the laboratory of the WPA, and that it has now been given FHA recognition, clearing the way for volume production by pine mills.

The new panel is constructed without nails by fastening random width boards together with recessed splines glued in place. Research has indicated that the 2 x 8′ panels are easiest and fastest to handle in applying the sheathing for walls, subfloors and roofs.

Adhesive Extracted from Larch

Other laboratory developments during the past year include a combination lighting system for better lumber grading, progress toward discovering a durable clear finish for exterior use, and demonstration that chemical protection of logs against staining in storage is feasible.

He also reported that laboratory work has been completed on the extraction of arabogalactan, an adhesive used in drug and dietary compounds, from larch lumber. Purification of the product, by separating the tannins, has been satis-

(Continued on Page 111)

DAN GELLERMAN, Setzer Forest Products, Inc.; EMERSON SMITH, Calder Lumber Co.; JACK LARSON, Bercut-Richards Lumber Co.; L. ERICKSON, Klickitat Pine Box Co.; HAROLD KELLER and J. STANLEY JENKINS, both of Pilot Rock Lumber Co.

WILLAMETTE LOGGING CONFERENCE

Eugene, Oregon — April 23-24-25, 1953

See Wentworth & Irwin Trailers on Display

MERCHANTS OF TRANSPORTATION SINCE 1903

In 1903, George G. Wentworth and Charles G. Irwin established a carriage and body shop on Portland's Water Street. Fifty years of progress have brought to Wentworth & Irwin, Inc. the indispensable "Know-how", experience and skills which have resulted in their reputation for operating the most versatile custom transportation plant in the West!

At left is shown original Wentworth & Irwin, Inc. crew with founders, Charles G. Irwin, standing in center on wagon, and George G. Wentworth, second from right in the foreground.

50

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The Wentworth & Irwin, Inc. organization offers to every truck transporter's problem a wealth of Experience and Knowledge gained from first-hand on-the-job collaboration with owners and operators of all types of equipment. The trouble-free dependability, efficiency and long life of Wentworth & Irwin, Inc.-designed Logging Trailers is an example of this factor which gives you the best possible equipment for your particular job!

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If loggers built trailers, this would be their product! During the past years of constant research in the field, Wentworth & Irwin, Inc. engineers have received many requests from operators for a sturdy, dependable lightweight trailer without reduction of capacity. With recent advancements in alloy metals these improvements are now possible. Real know-how built this trailer for larger payloads, less trailer weight on long hauls.

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NEW! Thick-leafed springs of special alloy. Proven durability but much lighter in weight, with less leaves.

NEW! *Built-in* hydraulic or air scales can be provided. Scales are a part of trailer, *not* tacked on after trailer is built!

NEW! Gravity or pressure water application for brakes have been designed for Wentworth & Irwin, Inc. trailers.

Simplified 3-point lubrication with large lubricant reservoir so essential to the busy logger in maintaining his equipment.

THIS TRAILER BUILT TO LOGGERS' SPECIFICATIONS

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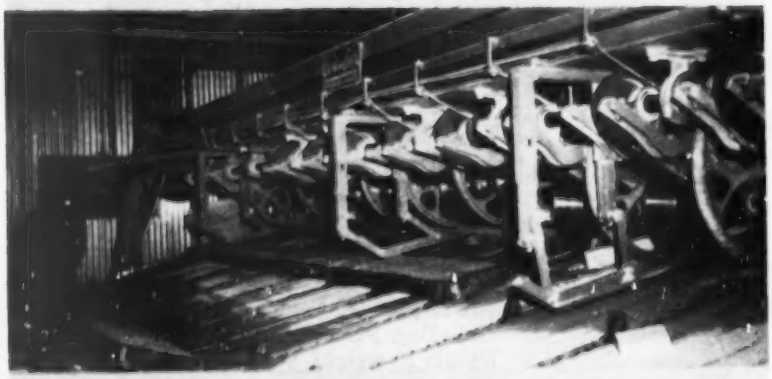
New Operation

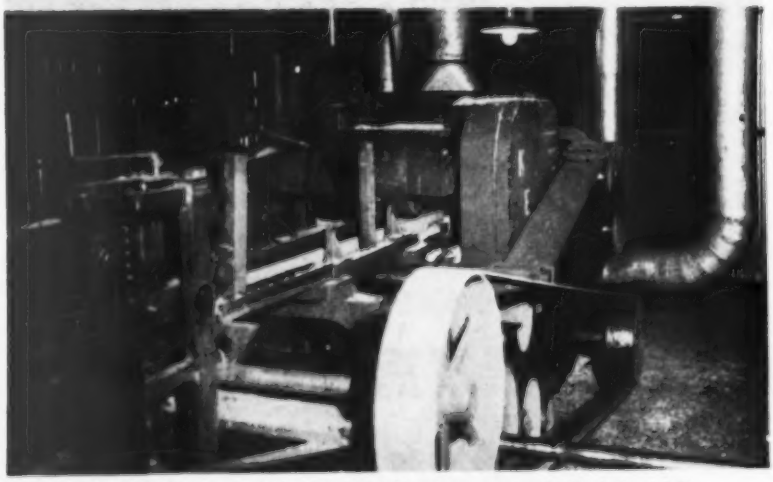
Intensive Utilization Envisioned As Planing Mill Unit Is Completed

Mt. Adams Forest Products, a new firm, recently completed construction of a planing mill at Bingen, Wash. The organization has a 60-acre plant site fronting on the Columbia river and extending back to S.P.&S. railway where the firm has installed its own siding.

At present this plant finishes lumber, operating either on custom milling basis or purchasing rough lumber for subsequent planing, end trimming and marketing. However the planing mill is expected to be but the original component of a more elaborate plant for carrying on diversified lumber manufacturing and processing, particularly with view to intensive wood utilization.

Principals of the Mt. Adams firm include T. F. Paulsen, Mrs. C. W. Paulsen, T. W. Paulsen and Leon M. Hilts. Development of an operation for maximum product utilization is common objective of the group.





TOP—ROUGH LUMBER enters planing mill at right and emerges on finish chain at left.
CENTER—END TRIMMING 3 x 12s with new Irvington automatic-selective trimmer.
BOTTOM—NEWMAN 512 MATCHER equipped with American Sheet Metal blower system and Idaco feed table.

9 Small Mills Feed Planer

Soon after inaugurating production at the planing mill the company was receiving lumber from nine small sawmills located within 25 mile radius of the plant. Lumber, mostly green, arrives at the Mt. Adams operation by truck and there unloaded by Hyster lift truck and transported and handled about yard and plant by a Hyster carrier or the lift truck.

At the planing mill lumber packages are placed on pull-up chains leading to a Zidell Machinery & Supply tilting breakdown hoist from which the stock moves board-at-a-time onto an Idaco automatic feed-table, which in turn delivers stock to a Newman #512 8 x 16 matcher purchased from Star Machinery Co., Portland, Ore. Finished stock emerging from this high-speed 8-knife machine moves onto a belt conveyor leading to Moline camelback-chain transfer. This transports the boards, dimension or timbers to an Irvington trimmer which automatically end trims and can be used to trim selectively. From this unit the lumber moves onto finish chains where the lumber is pulled and piled in carrier loads.

Trimmer Will Handle 24-ft. Pieces

The trimmer, Irvington's model 43C purchased as a package unit ready to set right in place at the mill, has saw units for end trimming 20 ft. stock. The machine was designed and built to take additional units to handle and process pieces 24 ft. long. It has the new Irvington "neutral axis individual saw control" for eliminating movement of control

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EVEN the very best saw filers need the very best saw files to do the very best saw filing jobs. And Nicholson (or Black Diamond) is the brand that makes that certain. From toe to heel, these famous saw files are as straight, evenly sharp-toothed and uniformly hardened as 89 years of file-making experience can achieve. Their high standard is widely recognized. Skilled filers say there are none better. Supply houses take pride in handling them.

CROSSCUT SAW FILE *(illustrated)*, for both cutter and raker teeth. Orange tang.

WEBSAW FILE *(illustrated)*, for pulpwood saw teeth of less than 60° angle. Has file teeth on four faces and two edges. For "M" websaw and crosscut teeth, use *CANTSAW FILE*.

CHAIN SAW FILES — *ROUND NO. 84 (illustrated)* is the most widely used type. For round-hooded teeth. Uniform spiral cut has special shearing angle for sharpening and smoothing at same time. Others: *FLAT*, with two round edges, for plain cutter-and-raker type teeth. *SQUARE*, for simultaneous filing of two cutting edges of square-hooded teeth. *LOZENGE* (diamond-shaped cross section), for filers' preference on square-hooded teeth.

HANDSAW FILES *(not shown)* come in a full range of Tapers (triangular)—Regular, Slim, Extra Slim, Double Extra Slim.

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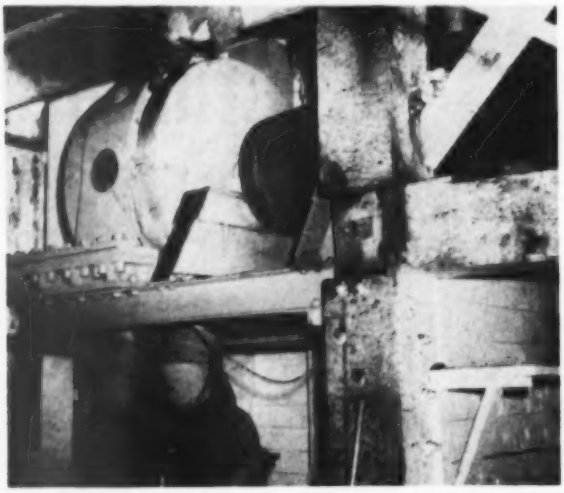
NEW SET-UP WITH V-BELT REDUCES HEAD-RIG SPEED



SHOWING THE NINE-FOOT double cutting band head rig at Hammond's Eureka plant driven by a 250 HP General Electric synchronous motor, through 17 Gates No. E 360 V-belts.

The engineering department of the Hammond Lumber Co., with mills at Samoa and Eureka, Calif., has found a simple way to cut down the speed on one of its 9′ double cut head rigs at the mill in Eureka, R. B. McIntosh, head of the engineering department, told a field editor of THE LUMBERMAN recently.

"The 9′ double cut band mill in our Eureka mill, which was installed new in about 1944, was driven by a General Electric 250 HP 360 rpm synchronous motor directly on the end of the arbor. This drive produced a saw speed of approximately 10,200′ per minute. This speed was too fast for most sawing and certainly much too fast for cutting the hard timber that we sometimes have," McIntosh explained.

"It was decided some time ago that something should be done to reduce this speed and possibly give us a variable speed set-up, or at least two or three different speeds. There seemed to be no practical way to get variable or different speeds with the existing motor installation.

"V-Belt" Drive Chosen

"We finally decided to install a V-belt drive, using the existing motor. Since this motor had no shaft of its own but was mounted directly on the end of the band mill arbor it was necessary to make a new shaft with a large V-belt pulley and two roller bearings on the end of which we mounted the motor in a manner similar to that used to mount it on the band mill arbor.

"This unit was mounted on a tilting base of the American Pulley Co. type. The second V-belt pulley was placed on the end of the band mill arbor where the motor had been. A set of 17 No. E. 360 Gates V-Belts completed the drive. We purchased an additional pulley a few inches larger than the first one and machined it to fit the band mill arbor.

Satisfied With Drive

"The original installation produced a saw speed of approximately 9,100′ per minute. By replacing the first pulley with the slightly larger second one we can get a saw speed of 8,500′ per minute. This slower speed is more suitable for the harder timber and we plan that we probably will change these pulleys once or twice during the year as the hardness of the timber varies.

"This drive went into operation Jan. 3, 1952 at a saw speed of 9,100′ per minute. On May 5, 1952, the larger pulley was installed and since that time the saw has been operating at the lower speed. This drive has worked out to our entire satisfaction."

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cables during operation. The arbor on which saws are mounted is direct powered by a 25 HP G.E. motor; a 3 HP U.S. Varidrive drives the feed chains.

Shavings are removed from the planer, transported from the mill and discharged into the refuse burner by American Sheet Metal Works blower system. Trims from the trimmer drop into a conveyor which takes them from the mill to an awaiting truck. This sort of handling system for trims keeps them out of the burner and readily available for disposal locally as fuel or utilization by other means if and when suitable processes are developed.

The organization, with view to furthering development of wood utilization within its plant operations, has engaged the services of Gerhart Umlauf who has specialized in this field for several years.

T. F. PAULSEN and LEON M. HILTS, two of Mt. Adams Forest Products partner owners.

Annual Meeting of all Western Kiln Clubs

The annual meeting for all kiln clubs in the west will be held in Boise, Idaho on May 15 and 16 with the Eastern Oregon-Southern Idaho Dry Kiln Club acting as host, according to an announcement of the president of the club, Lee Kincaid, Boise Payette Lumber Company, Emmett, Idaho. Orlin Osborn, Edward Hines Lumber Company, Burns, Oregon is Secretary-Treasurer of the club.

A feature of the program, which will consist of technical papers and panel discussions, will be the presentation of both the theoretical and practical aspects of drying problems. The U.S. Forest Products Laboratory, the Western Pine Association, and several dry kiln companies are among those participating in the technical sessions.

Subjects on dry kiln mechanics as well as subjects on dry kiln operation are scheduled. Heating systems, steam consumption, the need for segregation, the drying of mixed charges, and the drying of white fir are some of the topics appearing on the program. All dry kiln men are welcome.

Will Display at Eugene

Among the many firms who plan displays at the Willamette Valley Logging Conference, at Eugene, Oregon, April 23-25 include Sparks-Wills Co. who will have displays of Aeroquip flexible hose lines, World-Bestos brake linings and brake blocks. Thermoid hose, Whitaker cables and Luberfiner oil filters. Several men will be available to answer questions. . . . .

Cummins Diesel Sales of Oregon, Inc., will have a booth display at Conference.

Make Your Own Hose Lines

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Reduce Inventory
Reduce Downtime

Aeroquip Hose and Fittings form a perfect combination that permits you to make hose assemblies that meet Aeroquip's standard of quality . . . the highest in the industry. No special skill or training is required. This "Aeroquip Idea" cuts costs, inventory and downtime.

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THE HUSS CHRONICLE

From the Files of

THE LUMBERMAN, APRIL, 1922

Grays Harbor Veneer Company organized to build a plant on the site of the former Panama & Eastern mill, at Hoquiam, Wash. Manager is A. J. De Lateur, formerly with the Raymond Veneer Co. The output of the new mill will be sold mainly to a California basket company.

Veneer Products Company, Tacoma, Wash., elected J. W. Woodruff, chairman of the board; A. J. Ritchie, president; Bruce Clark, vice-president and manager; Phil Garland, secretary; G. M. Clark, superintendent.

The Canadian Western Lumber Co., Fraser Mills, B. C., announced it had purchased machinery which would double the output of its veneer plant.

A shipment of 150,000 sq. feet of plywood from the plant of the Elliott Bay Mill Co., Seattle, Wash., arrived at London, England. The panels were welcomed in England because "they were sanded on both sides, were nearly all first quality and very cheap in price."

The Olympia Veneer Co., Olympia Wash., started an addition to its plant. The addition will be 20x140 feet.

Col. W. B. Greeley, chief forester of the United States, told a special Senate committee on National Forest Policy that in his opinion the time was not right to inaugurate public regulation of timber cutting on privately owned lands. He urged adoption of the pending Clarke bill which provided for co-operative federal and state activities but without a federal regulation provision. The pending Snell bill provided that regulation would go along with any federal aid that might be extended to states.

So much for the past . . . In the Future, Try

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CHEMICALS FOR THE FOREST INDUSTRIES

A DETAILED PRACTICAL APPROACH TO A SUBJECT OF MAJOR IMPORTANCE TO LOGGERS AND LUMBERMEN WHO IN THE FUTURE WILL BE SPENDING A LOT OF MONEY FOR CHEMICALS.

EDITOR'S PREFACE

How much of a chemist are you? Probably not much of one . . . but chemistry is growing in application in the forest industries. We're using chemicals now to clean up around our plants (those are soil sterilants—killers of weeds and grass). Then we're using chemicals to prevent and control brush growth along logging roads and rights-of-way (these are called contact and/or hormone type herbicides). And the tree farmers among us are using chemicals—on a basal or aerial basis—to kill broadleaf trees, thus permitting the conifers to grow faster and better (those are called selective herbicides and synthetic growth regulating chemicals). And of course in addition to these newer applications, chemicals are being successfully used on a vast scale in killing forest insects. We thought an article on this type of chemistry would be a good idea. You're going to hear more and more of this kind of chemical use. So the following material should be of interest to you from a standpoint of terminology and information on what can actually be done and what can't be done with certain chemicals. The story is a condensation of a paper prepared by Virgil H. Freed, agronomist of Oregon State College, Corvallis, Oregon, which was delivered before the Pacific Northwest Section, Forest Products Research Society in February. We've tried to select the highlights of his paper . . . getting away from the highly technical language of the chemist as much as possible, yet retaining an authoritative presentation. This is a highly technical field, but lumbermen and loggers should know something about it, because a lot of money is going to be spent on such chemicals in years to come.

While the article is based on material furnished by Mr. Freed, it has been checked and added to by John E. Naylor of E. I. DuPont de Nemours and Company, R. S. Braucher, Dow Chemical Company, E. R. Raphael, Shell Oil and K. D. Hewitt of General Petroleum Corporation.

One of the most important considerations for the use of chemicals is to determine carefully the timing and application of the spray in order to minimize injury to the crop plant or trees. The following classification of herbicides will be helpful in this determination. There will be three general categories: (1) soil sterilants; (2) contact herbicides; and (3) selective herbicides.

Soil Sterilant Type Weed Killers

These are chemicals which when applied to the soil in sufficiently high rates, will prevent the growth of most species of plants for several years depending on conditions. In this category there are both permanent soil sterilants and temporary soil sterilants.

Permanent Soil Sterilants

Chemists report that permanent soil sterilants will usually last from one to several years. These materials are widely employed in control of patches of annual and perennial weeds and grasses; for sterilization of rights-of ways, ditch banks, lumber yards, railroad tracks, sawmills, industrial plant sites, etc.

(1) **Sodium Chlorate** is one of the best known permanent soil sterilants. It is especially effective on Canada thistle and many grasses. Dosages range from 3 to as high as 8 pounds per square rod. It controls most types of vegetation and frequently is employed as a spray containing one pound per gallon of water. Moisture or rainfalls limits the effectiveness of this chemical. Since sodium chlorate is very soiuble in water, it readily leaches from the soil. When mixed with dry organic maatter such as clothing, vegetation or wood, this chemical is highly combustible and presents a fire hazard.

Actually sodium chlorate should be applied at a time when there is sufficient rainfall (generally early spring) to carry it into the soil; but not excessive so as to leach it.

(2) **Arsenic** is the second best known of the chemicals used for a number of years as a soil sterilant. It is usually highly effective on plants high in sulphur such as legumes, Canada thistle and white top. Arsenic is a highly toxic compound to all classes of animals. It should be handled very, very carefully to avoid posibilities of poisoning.

(3) **Boron compounds**—these are mixtures the most active ingredient of which is boric oxide. To chemists these are known as borates and have an advantage over the above chemicals in that they are neither toxic nor do they present a fire hazard. There is a wide variance in the effect of the boron compounds on species of plants and grasses.

(4) **CMU (3-(p-chlorophenyl)-1, 1-dimethylurea)** is the first true organic sterilant. This is a product of Du Pont. The big problem with most organic compounds is that they break down rapidly in the soil. However, according to chemists, CMU has such a low solubility that it is quite resistant to leaching. It apparently breaks down very slowly in the soil. This insures its presence for some time, even under heavy rainfall conditions.

CMU appears to possess greatest toxicity toward grasses and most broadleaf weeds. As a soil sterilant CMU is used at dosages ranging from 10 to as high as 80 pounds per acre, depending upon type of soil, vegetation involved and amount of moisture. Generally speaking, usually 40 pounds per acre applied in 100 to 200 gallons of water is effective. Shallow rooted plants are easier to kill than deep rooted ones, as with most soil sterilants. It is sometimes desirable to use light applications, with repeat applications yearly, rather than using a heavy, single application lasting two or three years. CMU is formulated as a wettable powder, which is simply mixed with water and applied. It is low in toxicity, non corrosive, non volatile and non inflammable.

Temporary Soil Sterilants

These chemicals are substances which give a very short period of soil sterilization for from one month up to as much as a year, depending upon the condition and rate of application.

(1) **Ammonium sulfamate** (or "Ammate" weed and brush killer) is one of the most popular and well known of the temporary soil sterilants. It is used primarily for the control of weeds and bushy plants. According to chemists, a

in WIRE ROPE, too, extra strength demands the RIGHT KIND of muscle

Towering as high as eight feet on his hind legs, the Kodiak or Alaskan Brown Bear ranks as the most powerful animal of North America. Rugged muscle development makes him the feared and deadly fighter that he is.

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Chemicals

(Continued from Page 66)

foliage application of ammate is more generally toxic to brushy plants than any other substance known. This substance breaks down rapidly in the soil under influence of moisture, and the land can be planted to crops after a few months. It kills weeds and brush through burning the foliage, being translocated through the plant, killing stems and roots as well.

It is used at rates of 100 to 800 pounds per acre during drier months of the year applied as either a dry material or a wet spray.

It has proven effective on perennial grasses, Canada thistle, St. John's wart tansy, ragwort and a number of other perennials. It is non poisonous, non explosive, and non flammable.

(2) **Salts of Trichloro Acetic Acid** —commonly known as TCA—have been used the past several years for the control of grassy plants. TCA acts primarily through the soil in that it seems to be more readily absorbed by a plant's roots than by the tops. This means that TCA should be applied when there is adequate soil moisture or should be worked into the soil by some tillage operation.

Contact Herbicides

Contact herbicides are substances which kill only the portion of the plant or vegetation with which they come in contact. These materials are usually non-specific in their action and injure all types of vegetation.

(1) **Phenols.** Substituted phenols, commonly referred to as dinitro compounds, exhibit a high toxicity to many plants. They are generally quite effective on broadleaf plants; but are not so effective on grasses. Consequently, since oils are quite effective on grasses, phenols are frequently used to fortify oils, making a highly effective contact weed killer. Two principle phenols are used: Dinitrophenol is generally more effective on grasses.

(2) **Aromatic Oils** — Petroleum and coal tar are complex substances; and many compounds are derived from these during the refining process. Many of these materials are effective contact sprays for use on rights-of way and in orchards.

(3) **Endothal** is comparatively new so that its proper niche as a herbicide is not completely formed; but one of its apparent uses is as a pre-harvest or maturation spray for annual legume crops.

Selective Herbicides

Selective herbicides are materials that, when applied to a mixed stand of plants, will successfully destroy certain selected species in that mixed stand. In some cases they destroy broadleaf plants and leave grassy plants unharmed; and in other cases the reverse is true. Selective weed control has become one of the most important agricultural practices.

(1) **Carbamates**—these herbicides are used for the control of weedy annual grasses and a limited number of broadleaf plants. They are coming into prominence for the control of weedy annual grasses in such crops as cotton, clover and other legumes, as well as perennial grasses for seed. They are also finding limited use for the control of perennial grasses such as quackgrass and Bermuda.

These substances function through the soil by coming into contact with the roots. This indicates the necessity for application about the time that germination occurs.

(2) 2, 4-D (2-4-Dichlorophenoxyacetic acid)—This susbtance is one of the best known growth regulating chemicals, and it has developed into one of the major herbicides in use today. There are many chemical possibilities related to 2, 4-D. As a herbicide it has many uses and few limitations. Environmental conditions have a marked effect on plant response to 2, 4-D. Lack of moisture, low fertility, low light density may all contribute to poor results.

The ability of 2, 4-D to wet the plant and penetrate is also a factor. The better the wetting and penetration of a 2, 4-D solution in a plant, the better the results may be. Applications with water at gallonages of 20 to 100 gallons per acre appear to be the best for most plants.

The parent 2, 4-D is a white crystalline organic acid, too insoluble in water to be used directly for field application. The chemical, therefore, is processed to form sodium, ammonium, and amine salts and esters—in order to get the parent substance in a form where it can be used.

Formulations of 2, 4-D

(1) **Esters**—these are formed by the reaction of 2, 4-D with alcohols and are low melting point, waxy-like solids or liquids, depending on which ester derivative has been formed. Most of the common commercial formulations are liquids that disperse in water. They are also available in dust.

(2) **Salts of 2, 4-D**—This form may be either a soluble powder or liquid. They may be either sodium, ammonium, or amine salt forms. If in doubt as to whether a substance is the ester or liquid salt form, place a few drops of the liquid in a small container of water and shake. If the solution is clear even though colored it is a salt. If the water turns milky the product is an ester.

(3) **Mixtures of 2, 4-D and 2, 4, 5-T**—these have been used for the control of a large number of brushy species of plants. Oil or water is used as a carrier; that is, oil when plants are dormant and water when plants are in foliage.

MCPA—This substance, developed in England, is another growth regulating chemicals very similar to 2, 4-D. It may be used with greater safety on such sensitive crops as flax, certain legumes like red and Ladino clover, and small grains such as rice and oats.

* * * * *

Forest Industry Applications

With these definitions in mind, let us apply these chemicals to forest products.

There are three situations where one interested in forest products would be concerned with chemical weed control. These are: Control of brush, sterilization of plant growth in storage and curing yards and around mills, and a third case of chemical weed control which would involve the principal of selective weed control. In this later case, such problems as the control of alder in coniferous plantings, destruction of certain perennial weeds along rights-of-ways might be the major problems.

The control of brushy species of plants may be achieved with one or two types of application of chemical weed control, either foliage application where the chemical is applied in considerable volume of water to the plant after it has leafed out; or secondly basal applicataion where a concentrated oil solution of chemical can be applied to the lower 18 inches of the stem or trunk almost any month of the year.

In foliage application, several types of materials may be used. "Ammate" weed and brush killer and the soil sterilant, sodium chlorate, can be used effectively for the control of many species of brush. In this instance the materials are mixed ¾ to one pound of "Ammate" along with four to six ounces of Spreader-Sticker per 100 gallons of mix to wet the foliage, or one pound of sodium chlorate per gallon of water. It should be noted that these two chemicals must be used separately and a mixture of them should never be employed. Such a mixture

will be applied at the rate of 200 to 300 gallons per acre on a solid stand of brush 6 feet high. At this rate the sodium chlorate would cost in the neighborhood of $12.00 per hundred gallons of spray and the "Ammate" or ammonium sulfamate would cost in the neighborhood of about $17.00 per 100 gallons of spray.

Brush Control

The brush killer mixture of the esters of 2, 4-D and 2, 4, 5-T are frequently used in foliage application for brush control. Here three quarts of the prepared formulation, that is, three pounds of the parent acid equivalent is used in 100 gallons of spray solution. The cost involved in this case is approximately $8.00 per 100 gallons of solution. The effectiveness of this combination can be increased by the addition of ten pounds of the sodium TCA per 100 gallons. This combination is most effective for control of alder, willow, scotchbroom, blackberry, ash, elderberry and poison oak although more expensive.

A recent development in chemical brush control is the so called basal application of the growth regulator mixtures. This treatment consists of making application of a concentrated oil solution of the ester form of the growth regulators to a portion of the lower stem of the plant. Water has been found ineffective as a carrier for this purpose so that full reliance must be placed on stove or diesel oil as the primary carrier.

The mixture used is made up by dissolving 5 gallons of four pound per gallon 2, 4-D, 2, 4, 5-T ester formulation in 100 gallons of oil. More correctly stated 5 gallons of this mixture is used to make up 100 gallons of final spray. This gives a concentration of approximately two and one-half per cent or 25,000 parts per million. For a wide range of species it has been found that the optimum range of concentration is between 20,000 and 30,000 parts per million or two to three per cent.

The principal oil used for this work has been of the diesel oil or stove oil class, but some chemists report that the more highly aromatic weed oils such as General and Avon weed killers or Shell Aromatic 54 are more effective as carriers for this type of work than the diesel oil type.

According to K. D. Hewitt, chief process products engineer for General Petroleum, aromatic oils are more effective in the control of weeds and brush than are the ordinary diesel or stove oils. Mr. Hewitt points out that aromatic oils have two advantages: (1) a higher degree of solubility for the ester formulations and for most contact herbicides and (2) more phyotoxic. These oils have been successfully used by major railroads and also in the control of weeds in the citrus groves of southern California and Arizona.

Almost any type of spray equipment may be used for this application, ranging from a three gallon knapsack sprayer to a more elaborate power equipment. The nozzles used to apply this material are the standard weed control nozzles mounted in a U shape piece of pipe. The diameter of the U shaped book should be large enough to leave a very ample margin between the nozzle and the trunk of the tree when the open end of the U is passed around the tree. The nozzles should be of the low volume category as there is no need to drench the plant. Simply wet the lower 18 inches of trunk to the point of run-off, starting at the base and working up to the 18 inch height, being sure to wet the entire circumference of the tree.

The effectiveness of this treatment is dependent upon bark absorption of the chemical so that bark rapidly becomes a limiting factor of effectiveness. On thick bark species such as oak, a trunk diameter of 4 to 6 inches may indicate sufficiently thick bark as to make the treatment impractical whereas on alder or willow even larger trunk diameters can be treated effectively. The basal treatment may be applied at any time of the year and is not limited merely to winter or early spring. Summer applications appear to be equally effective.

On thick bark species, where absorption of our basal treatment becomes a limiting factor, incisions (frills or notches) in the bark made by chopping may be used to circumvent the problem. In this case the concentrate used in basal application is sprayed or injected directly into the incision. These incisions should be made no further apart than 4 inches around the circumference of the plant to be treated.

According to Du Pont chemists, "Ammate" weed and brush killer gives good results when used for this purpose, as well as for stumps. Simply mix 4 pounds of "Ammate" in 1 gallon of water and pour or paint the cut surfaces. In the case of notches or stumps, "Ammate" crystals are often applied as is to the surfaces. Regardless of what is used, treatment should be made as soon as possible after cutting—before the sap drops down into the roots. Be sure to wet the outer growth ring. Water soluble dye can be added to "Ammate" solutions to mark treated trees.

Weed Control

The control of certain herbaceous plants in drying yards and along rights-of-ways often is a serious problem. In this instance it is desired to remove all vegetation and to prevent its regrowth for as long as possible. Reliance must be placed on the soil sterilants for this type of weed control program. There are several chemicals that may be used for soil sterilization—arsenic, sodium chlorate, sodium chlorate-borate mixture and the new organic chemical CMU.

Sodium chlorate is an effective soil sterilant and under most conditions gives excellent control of all types of plants. This material has certain weaknesses however, in that it is readily leached from the soil by heavy rainfall. This material when mixed with organic matter forms a very combustible mixture. For soil sterilization sodium chlorate is applied at the rate of four to six pounds per square rod or between 640 and 960 pounds per acre at the end of the rainy season.

The chlorate-borate mixtures may be obtained containing from about 30 per cent sodium chlorate to approximately 45 per cent chlorate. The chlorate is the principal active ingredient with the borate present to reduce fire hazard and provide a longer sterilizing effect in that the borate is effective for the control of certain seedlings weeds. Chlorate borate mixtures are applied at the rate of three to five pounds per 100 sq. feet of area again at the end of the rainy season. The timing of application is rather important so as to take advantage of the slight amount of rain to carry the material into the soil where it is most effective but to avoid the heavy downpours of the main rainy season which would cause excessive leaching consequently reducing the effectiveness of the treatment.

80% CMU weed killer is the recently introduced, new Du Pont organic soil sterilant. It is highly effective for the control of grasses, broadleaf weeds and certain other herbaceous plants. Where grasses are the principal problem from 25 to 40 pounds of CMU per acre is the recommended application. In extremely rainy areas it may be desirable to make two 25 pound applications spaced from several months to a year apart rather than relying soley on the 40 pound rate appli-

(Continued on Page 72)

Straying from the "Straight-and-Narrow" is their Business

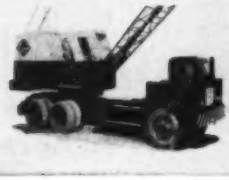
Lima Type 802 crane loading logs for trucking to Collins Pine Mill at Chester, California.

FOR HIGH SPEED MOBILITY

Note also that Lima Types 34 and 604 are available with rubber tired mountings, each made two ways:

Single engine, single operator, for speeds up to 8 MPH (M series)

or



T Series, separate engines for travel and crane operation. Speeds to 31 MPH!

Yes indeed, you don't have to pick your path with a Lima. For example, look at this job in the California woods . . . the Lima Type 802 crawler ignored the condition of the terrain and went all the way into this clearing to load logs right on the spot. This was a cinch for the Type 802 because Lima designed it to fit all ground conditions. There's ample road clearance, also, so it can travel over very rough or uneven ground.

You, too, will find Lima cranes and shovels most dependable and economical for all logging operations. Compare them with any other machines and you'll be sold on Limas with their strong, rigid construction, counterbalanced weight distribution, air controls for easy operation, anti-friction bearings throughout, and many other big advantages.

Wouldn't you like to know which Lima machine fits your needs best? The complete Lima line includes shovels from ¾ to 6-cu. yds., cranes from 17 to 110 tons and draglines variable. Please write to:

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SHOVELS • CRANES
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BALDWIN BLH LIMA-HAMILTON
Construction Equipment Division

BALDWIN-LIMA-HAMILTON CORPORATION
Construction Equipment Division
LIMA, OHIO, U.S.A.

U. S. Plywood Sawmill to Move

During this summer the sawmill of the Bear Creek Division, U. S. Plywood Corp., Anderson, Calif., will be moved from Shingletown, to a site adjoining the U. S. Plywood plant at Anderson, according to Gene Brewer, general manager of U. S. Plywood at Anderson. Brewer said that a new 4 x 16 press was being installed in the Novoply plant, which would increase production 70%.

Chemicals

(Continued from Page 70)

cation. In the application of CMU about 5 gallons of water should be used for each pound of CMU. CMU comes as a wettable powder and does not dissolve in water but is held in suspension. Consequently, sufficient water should be used to reduce the handling problem. Mild agitation is needed to maintain a uniformly mixed solution.

There are instances where maintenance of a grass cover particularly along road sides could materially reduce brush problems and problems with perennial noxious weeds such as tansy ragwort. In a case such as this selective chemical weed control should be practiced. In this case 2, 4-D would be employed usually at a rate of approximately one pound of chemical per acre in sufficient water to get a thorough uniform coverage.

Another case of selective weed control of interest to the forester is the control of alder and willow in new plantings of conifers. Again we find the weed killer 2, 4-D to be the most practical solution to the problem. In this case a foliage application of the chemical is made in the spring employing one and one-half to two pounds of chemical per acre in either airplane application or application by ground equipment, depending upon the terrain. Very satisfactory relief of young timber has been obtained by this method with little or no injury to the young conifers. The selectivity here is dependent in part both on the tolerance to the 2, 4-D coupled with the fact that the overstory of brush intercepts most of the spray with the conifer getting the lesser amount. Some bending of the leader has been noted in certain of the conifers but in time the plant seems to outgrow it. 2, 4, 5-T on the other hand if used singly or in combination with 2, 4-D results in greater injury.

The possibility of producing more and more finished product per 1000 board feet of log consumed again becomes a reality. Development of additional product per unit of wood is not confined to any one type of forest products industries mill nor to any one department in the plants.

Grinder Man Develops New Moulding Idea

MAKING 8238 CORNER MOULDING and getting 8065 quarter-round as dividend in place of shavings was the idea of E. A. Bailey, set-up and grinder man, Potlatch Forests, Inc., Lewiston, Ida. He is shown at outfeed end of S. A. Woods moulder as the two moulding patterns emerge simultaneously.

Potlatch Forests, Inc., Lewiston, Idaho, now makes two pieces of moulding from the same stock conventionally required for just one piece of moulding.

E. A. Bailey, moulder set-up and grinder man, originated this plan for making a piece of quarter-round (pat. 8065) or cove moulding (8060) when running corner moulding (8238), the second piece of moulding taken from that portion of stock which is otherwise removed as planer shavings.

Employee Awarded Cash for Idea

As recognition of soundness of the idea, PFI management has awarded $260 to Bailey for his progressive contribution.

When asked by THE LUMBERMAN how to go about getting two pieces of moulding where one has formerly been obtained, Mr. Bailey replied as follows:

"To simultaneously produce 8065 quarter-round and 8238 corner moulding (from stock conventionally run to a single piece of 8238), the set-up calls for (1) a plain straight-knife head at top; (2) front side head, a double eased-edge knife set easing to 1⅜ in.; (3) bottom head, a combination of two 1 in. straight-knife discs separated by a saw swage-set to desired kerf; (4) back side head contains 8065 shaping knives ground to also rabbet out part of the 8238 pattern, and eased-edge knives to round out third corner of the 8238. No additional heads are necessary—in fact the old set-up employed one more head than does the new technique which requires four heads."

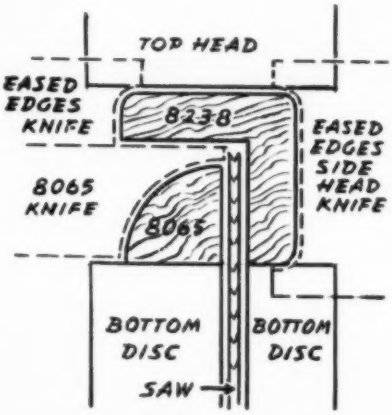
Waste Reduced by 66%

This set-up system has reduced waste resulting from running 8238 by 66 per cent; furthermore, it reportedly makes for better mouldings. No time loss has been experienced from set-up failures.

Bailey says, "It is harder to make this set-up but it is more exacting to set the heads. I do not tear the heads down except to grind the knives."

These mouldings are run on S. A. Woods 134 BM moulders equipped with frequency changer to double spindle speed from 3600 to 7200 r.p.m. The machines operate with 2-knife head set-up at 60 l.f.p.m.

Bailey feels that any moulder capable of running 8238 could be used to run the two pieces of moulding simultaneously with either jointed or honed knives.



SCHEMATIC INDICATION of layout for producing patterns 8238 and 8065 from stock conventionally used to produce 8238 alone.

'COPTER SEEDING IN B. C.

Aerial tree seeding by helicopter was carried out on an extensive scale on Vancouver Island by MacMillan & Bloedel Ltd., recently, but with results that are hard to calculate, according to Chief Forester Angus MacBean. Last summer's drought was certainly no advantage.

At Camp One, Alberni Pacific division, a helicopter fitted with a special disseminating device laid rodent bait in the form of wheat painted green over an area of 1,760 acres of logged-off land, and a week later the machine was flown over the same area sowing Douglas fir and hemlock seed.

Operating in the Chemainus division, on the east coast of Vancouver Island, in the Copper country, a helicopter covered about 2500 acres of cut-over land with bait, but it did not follow through with seed, as it was calculated that there has been sufficient seeding through natural agency from trees left standing after patch logging.

24 A. Per Minute Covered

The helicopter, owned and operated by Dean Johnson, McMinnville, Ore., spread bait at the rate of 60 miles an hour in 200 foot swaths. It covered an average of 24 acres a minute.

"Helping nature grow new forests can be discouraging at times," says Mr. MacBean. "In June, a few months after the operation, a survey of Copper Canyon's baited areas showed a very good 'catch' from natural seeding—over 1,000 Douglas fir alone to the acre, with nearly 4,000 hemlock and cedar in addition. If the mouse population had not first been reduced by baiting, it is certain that this satisfactory degree of stocking would not have followed."

1952 Summer Hot, Dry

Proof of this was found in a nearby logged setting that had not been given the baiting treatment; here, no germination resulted because the large uncontrolled rodent population had eaten the seed.

But the unusually hot, dry summer of 1952 played havoc with the tender new forest, and a re-survey in November disclosed heavy mortality. Stocking was reduced from 60 to 27 percent.

By contrast with this disappointing result, Ash River's aerially baited and seeded new forest stood up quite well. In November, 1,151 healthy seedlings to the acre were counted, so distributed as to constitute satisfactory stocking. Hand planting is usually done at the rate of 800 seedlings to the acre.

Hope for Normal Weather

Mr. MacBean says that despite the costly loss at Copper Canyon this method of providing for the next timber crop will, as needs arise, be

ABOVE — HELICOPTER WHIRLING across Copper Canyon on Vancouver Island scatters green-painted rodent bait and then goes over the same area spreading Douglas fir seed, mostly from a height of 50 to 100 feet.

RIGHT — PILOT DEAN JOHNSON of McMinnville, Ore., revs the engine of his helicopter while Mechanic Dan Nickerson calibrates the flow of wheat bait through the disseminating unit. The machine was set to scatter one half a pound of seed per acre, or 25,000 seeds.

Ness Reelected Head Of Dry Kiln Club

At the recent annual meeting of the West Coast Dry Kiln Club at Longview, Wash., Leonard Ness, of the St. Paul & Tacoma Lumber Co., Tacoma, Wash., was re-elected president and Paul A. Loris, Clear Fir Products, Springfield, Oregon, was re-elected secretary.

Prior to the luncheon at the Weyerhaeuser Timber Company's cafeteria, the forty-two persons attending the meeting visited the Weyerhaeuser plywood plant.

One of the points of interest at this plant was the method in which they dry veneer. The sheets of veneer enter the dryer, which is at a temperature of 400° F. and move continuously through the dryer where the temperatures are changed in four stages, leaving the dryer at 350° F. and then enter a cooler which lowers the veneer temperature to 100° F. This procedure in drying is just the reverse of that procedure followed in drying lumber, as the veneer drying starts at the high heat and comes out at a low heat, whereas lumber starts at a low heat and comes out at a high heat. Also of interest was the fact that the veneer is in the dryer all the way from eight minutes to thirty minutes, depending on the thickness and whether it is sapwood or heartwood. This reduces the veneer from the original moisture content down to 3% or less.

Later at the business meeting, a talk on Elements of Kiln drying Costs was given by Art Mottet, research director of the Long-Bell Lumber Co.

'Copter Seeding

(Continued from Page 73)

examined again, in the hope that the assistance of normal spring and summer weather will yield more uniform and successful results.

Similar baiting and seeding experiments have been quite successful in Oregon and Washington forests, but climatic conditions on Vancouver Island are somewhat different. In recent years the Forest Service in B. C. has planted from 7,000,000 to 10,000,000 trees in the form of seedlings, but this is independent of the broadcasting of seed. There has been extensive tree planting in the forests of the interior, some of this being accomplished by tractor-driven mechanical seeder after the ground had first been cleared by bulldozing. Few areas on the coast would be sufficiently level for this type of operation, however.

California Lumbermen Report Better Safety Record for '52

OFFICERS of the California Lumberman's Accident Prevention Association—L to R— NAT EDWARDS, Wood Products Co., re-elected secretary-treasurer; CHARLES W. DOE, Caldor Lumber Co., Diamond Springs, re-elected president; and FRANK A. VALENTINE, Caspar Lumber Co., Caspar, elected vice-president.

Members of the board of directors are: Wm. B. Berry, California Foresteering, Placerville; Warren Carleton, Winton Lumber Co., Martell; Vern Chamberlen, Feather River Pine Co., Feather Falls; D. D. Fairbrother, American Forest Products Corp.; C. L. Hokonson, Simpson Logging Co., Arcata; Fred Hull, Fruit Growers Supply Co.; Herbert McMahan, Ralph L. Smith Lumber Co., Anderson; E. S. Mackins Jr., Hammond Lumber Co., Scotia; H. E. Neville, Pacific Lumber Co., Scotia; and Orman Oak, Union Lumber Co., Fort Bragg.

Good progress in cutting down accidents among the members of the California Lumbermen's Accident Prevention Association was reported at the annual meeting of that group in San Francisco last month.

Harold E. Neville, Pacific Lumber Co., Scotia, on behalf of Derby Bendorf of the same company, told the group that the report covers 47 reporting companies embracing approximately 19,000 employees with 36,115,661 man hours of exposure.

Most Members Improve Record

The accident experience record for the group in 1952 shows a 7% improvement over 1951 and a 16% improvement over 1950. Sixty-six and two thirds per cent of the companies reporting had a lower frequency rate in 1952 than in 1951, and 33⅓% had a higher frequency rate.

The record also shows that of those companies reporting for three consecutive years, 1950, 1951, and 1952, 81% shows an improved frequency rate in 1952 and 19% shows a higher rate.

Logging and transportation segregated shows an improvement of 10% in 1952 over 1951. Logging alone shows a 17% improvement in 1952 over 1951. Plant operations show an improvement of 4¼% in 1952 over 1951. Transportation shows a 16.6% increase in frequency in 1952 over 1951.

Frequency Drops to 67.6

During the meeting E. S. Mackins Jr., Hammond Lumber Co., Scotia, chairman of the safety order committee reported on the status of safety orders and suggested immediate attention be given to the use of fork lift trucks in the loading and unloading of logs.

A. C. Blackman, chief, Division of Industrial Safety, State of California, discussed the use of vertical edgers in front of head saws, and the use of fork lifts in the loading and unloading of logs.

M. I. Gershenson, chief, Division of Labor Statistics and Research, State of California reviewed the 1952 records of the forest products industries. Estimated injury frequency rates show a drop from 1950 to 1952. In 1950 the estimated frequency rates of disability accidents was 74.8, and in 1952, 67.6.

Caspar Lumber Co. Wins Safety Award

Setting a new all time record in redwood manufacturing industrial accident prevention, the Caspar Lumber Company at Caspar, Calif., has been named 1952 winner of the coveted C. R. Johnson Memorial Safety trophy. The winning accident frequency was 15.43, based on an accepted industry formula.

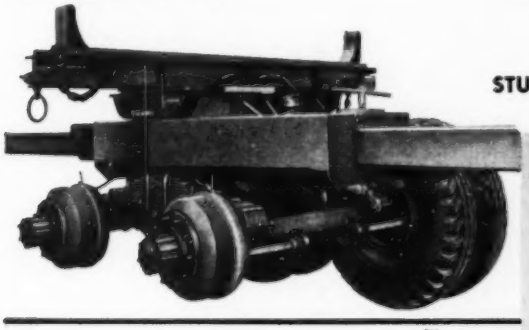
In second place and only forty three one hundredths per cent (.43) behind the winner, was the Union Lumber Company of Fort Bragg, California.

In third place and also showing the greatest per cent of improvement (45 points) was the Northern Redwood Lumber Company of Korbel, California.

You can torture and abuse this TRAILMOBILE dolly ...but it's always READY FOR MORE!

The Trailmobile dolly is built to take the big boys right in stride over the worst roads you can name. Engineered from the tires up with big log hauling in mind, you'll know after the first trip you've found what you've been looking for in this super-strong Trailmobile dolly.

It'll carry the limit without permanent deflection. It needs only the minimum amount of maintenance. It's safe. It has been tested and proved under the strictest, most rigid road and load conditions possible. Find out how you can fit the Trailmobile dolly into your logging operation.

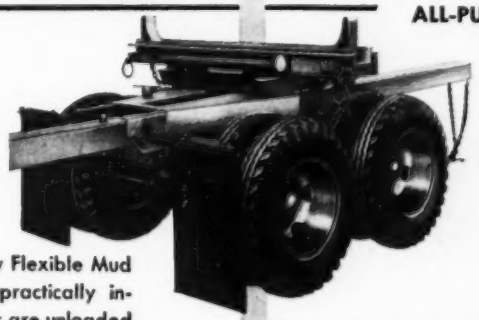


STURDY, SAFE SUSPENSION

The heavy-duty trunnion suspension has extra width spring leaves made from silico-manganese steel. The stress-resistant axles are tubular steel with 18,000 pound capacity. Brakes are positive, rapid action type with "S"-cams; powered by either vacuum or air.

ALL-PURPOSE BUNK AND TACKLE

The eight-foot bunk of heavy gauge steel will swing in either direction on bearings for easy turning and accurate following. A positive lock holds the bunk in place during loading. The reach pole can be adjusted to center the load at the ideal balance point for safe and easy pulling.



NEW I.C.C. EQUIPMENT

This model has the new Flexible Mud Flap Hangar that is practically indestructible. When logs are unloaded and roll over it, it swings down; then snaps back in place, unharmed. Complete lighting is factory-installed. The mud flaps and lighting comply with I.C.C. regulations.

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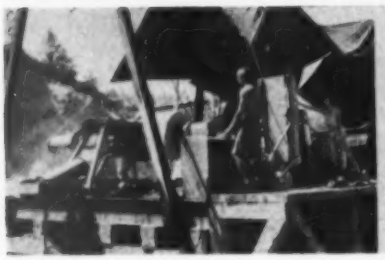

CLOSE-UP of the barker at the portable veneer mill.

COE 55 x 66 lathe at the portable veneer mill of Humboldt Plywood Corp., Arcata, Calif.

GREEN CHAIN and Coe clipper, on portable veneer mill at Snow Camp, 20 miles from Arcata.

Humboldt Plywood Corp., Arcata, Calif., long one of the leaders in plywood manufacture in California, is just as conservation-minded as any operator in the business. Much of the company's timberlands are at a high elevation or other locations where operation is possible only part of the year, and where access is difficult. Also they wanted to get the value out of logs with insufficient recovery to warrant hauling a great distance.

What was the answer? The company came up with a portable veneer mill, which was in operation last summer at Snow Camp, some 20 miles from the mill at Arcata in the rugged mountains of Humboldt county.

Veneer Goes for Cores

According to Dewey Lung, Humboldt Plywood Corp. manager, this portable veneer plant enables the company to peel logs that otherwise could not be hauled economically to the Arcata plant. With this set up Humboldt Plywood can peel good veneer out of salvage logs for core stock.

Plans for the plant were developed under the supervision of Irvin S. Becker, who has charge of all maintenance and construction for Humboldt Plywood Corp. and the Humboldt Lumber Corp. Bill Branaman, Eureka Boiler Works & Acme Foundry Co., also had a great deal to do with the design and construction of the plant.

The main object of the design of the mill is to keep it in units that could be hauled on the highway without special permit. The units need no base—they are mounted on timbers. One unit is the barker. The next unit is the Coe lathe, the Coe clipper and table are another unit, and the sorting table another. The Murphy ME66 diesel generating set is still another unit.

Set Up Made Quickly

It can be set up and operated in a week or 10 days, depending on the terrain. The units are mounted on steel I beams, eight and 15". These I-beams connect each unit to the other when the mill is set up so that when the mill is hooked up each unit is spaced correctly. The green chain is 30' long, and the over-all length of the plant is 100', with a maximum width of 42' which provides storage space for veneer.

The electrical wiring and installation are fitted with arc tight connectors for fast break down and re-connection and were put in by the Electrical Construction Co., Henry Shinaman, manager.

Logs are skidded right to the mill with tractors. A portable sawmill is also used in conjunction with the portable veneer mill, and saw logs, also from a salvage operation, go to the sawmill, while the veneer mill takes the veneer logs.

One Conveyor in Plant

Logs are bucked into peeler lengths with chain saws and picked up with a 5-ton Moore-Chisholm hoist on a monorail mounted over the barker. This hoist and monorail take the peeler bolts to the barker, which was built by the Eureka Boiler Works & Acme Foundry Co. On the same monorail is another hoist, which feeds the peeled bolts to the 55 x 66 Coe lathe. From the Coe lathe veneer goes to a Coe clipper.

There is only one conveyor in the plant. It goes through the center of the mill, and removes bark, cores, and trash, and dumps this debris over the side of the hill. Air is provided with a Model 50 Schramm air compressor.

Power for the entire plant is provided by a Murphy Model ME66 150 HP diesel engine, 125 kva generator, with 60 kw DC generator on the back.

The plant is under the supervision of Ray Alford. It is designed to produce approximately 15,000 board feet log scale of core material with 11 men including supervision, in eight hours.

N. California Sawmill Club Discusses Mill Topics

Thirty-seven members of the Northern California Sawmill Club met at Paskenta and Corning as guests of the Crane Mills last month.

The morning session was devoted to a mill inspection where the new Ferrari saw guide, on the head rig of the Crane mill at Paskenta was demonstrated by Art and Ernie Ferrari, brothers and saw filers, who invented the new saw guide. Seventeen of these saw guides are in operation on various saws in the new re-manufacturing plant of the Ralph L. Smith Lumber Co., Anderson, Calif.

The afternoon session was devoted to a discussion of log haul drives, kickers, niggers, and log turners. Speaker was Dick Beane, Klamath Iron Works, Klamath Falls, who explained use of barkers in a sawmill. Lee Moffett, American Forest Products Corp., was program chairman.

Francis Haas, Ralph L. Smith Lumber Co., is president of the group, Mets Lerwill, Collins Pine Co., Chester, vice-president; and Bob Korn, Shasta Box Co., Redding is secretary.

The next meeting of the group is scheduled for April at the Collins Pine Co., Chester, and the speaker will be an independent consultant who will talk on Forest Service grading.

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HANCHETT GRINDERS

THE BASIS OF AN INTEGRATED FOREST PRODUCTS OPERATION

By J. O. McCUTCHEON, M.E.I.C.,
MacMillan & Bloedel Limited, Alberni Plywood Division, Port Alberni, B.C.

An integrated Forest Products operation is of considerable current interest in this Province. The past recent months have seen accelerated progress towards integration on the part of all the principal timber corporations of this region, indicating a motivation close to economic necessity.

In the Coast Region of British Columbia, integration has come to mean the combination of timber stands and logging with converting units for the production of: Sawn Lumber, Plywood, Shingles, and Pulp, including facilities for a horizontal movement of logs and salvage material between the converting units.

The function of the integrated operation is to convert the raw material in the timber stands to its highest utilization as measured by gross value and volume of product. This is the primary step towards conservation of forest resources, which in this region, is the stretching of the static mature forest until the increment-producing young forest reaches a sustained yield condition. The timber will then yield its highest economic return. When the integrated facilities are complete, the consumer, through his application of value, will direct the flow.

The basis for the provision of converting facilities is the timber in the stands. A recent estimate of the makeup of mature timber standing in the Coast region gives the principal species as:

Douglas Fir 24%
Western Hemlock 30%
Western Red Cedar 26%

with substantial amounts of Balsam and Sitka Spruce. This is the overall Coast distribution and amounts of each species will vary widely with individual holdings. In large areas of the Coast forest there is virtually no Douglas Fir.

Douglas Fir with large amounts of clear wood and great structural strength finds primary conversion as plywood and sawn lumber. Western Hemlock is similar to Fir in available clears and in strength and, with its associated species Balsam, is also prime pulp material. Most Hemlock and Balsam will then go to the sawmill for primary conversion, with the pulp mill competitive for the low grades. The beauty, workability and durability of Western Red Cedar send its higher grades to the sawmill and shingle grades to the shingle mill. The large clears available in Sitka Spruce with fine texture, straight grain and high strength lead it to the sawmill for primary conversion.

As is clear from the foregoing, the converting units must be in the main complementary and not competitive in their drawing upon raw material. In the fringe areas where they are competitive, the principle of highest return will direct the logs to their proper use.

The pulp mill will in general feed upon the leavings of the lumber and plywood mills, supplemented by those logs which are uneconomic to cut to lumber and by logging wastes. The pulp mill is then necessarily of a type which can utilize the species and types of chips developing from its sister mills.

The typical forest products operation here on the coast has begun with the sawmill and its associated timber stands. Profits from the logging and sawmilling operation have been put back in to add shingle and plywood facilities, and further profits have allowed the provision of pulp facilities, the biggest step in integration, and the most costly.

All of these converting units are distinguished by the very large investments required. The announced costs of some recent installations may be of interest:

A gang mill was added to a Port Alberni operation for about .....$ 1,000,000
A plywood mill built in Victoria for about .....$ 2,000,000
A kraft pulp mill near Nanaimo for $19,000,000
A pulp and paper mill going up near Elk Falls for about $40,000,000

All of the facilities listed are parts of integrated operations and it is obvious that their investors must, in each case, be assured of raw material supplies sufficient for a very considerable period. Very large timber supplies must be recognized as a basic requirement when assessing the benefits of integrated operation in the forest products industry.

The basis of measurement of raw material is the BC Log Scale, a scale developed, as noted in the official foreword, "to allay the friction existing between millmen and loggers throughout the Province." This scale serves its purpose well, but in order to illustrate comparative volume recoveries, the cubic foot is used in this paper, showing its equivalence in B. C. Log Scale where applicable.

THE SAWMILL

The sawmill was the beginning of the forest products industry and it remains the center of an integrated operation.

The typical Coast sawmill originated as a green mill, built to service the waterborne export trade and operating primarily on high quality Douglas fir. The first steps towards integration were the expansion of remanufacturing facilities and the addition of dry kilns and planing mills. These extended facilities allowed the mill to meet the requirements of the diversified domestic rail market and, in so doing, to add to its species cut and to increase grade recovery from its input.

Extreme flexibility in cutting, drying and dressing is a characteristic of the present B. C. Coast sawmill which must be prepared to enter any of several export markets as well as the rail market, all with widely different requirements.

Specialty mills, cutting only cedar or hemlock or spruce, have developed, but these are few in number. The usual "Fir" mill cuts all species coming out of its timber stands.

Shingle mills, with their ability to take raw material in short blocks, offer a means of obtaining a high grade product from lower grade logs, in addition to an entry to a periodically valuable market, and have been a natural accompaniment to the sawmill.

The plywood mill followed as a logical extension of manufacturing facilities.

Changes in log input to the sawmill followed closely. Peeler grades of Douglas Fir, formerly the source

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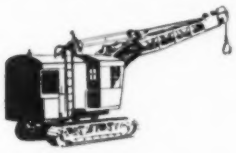
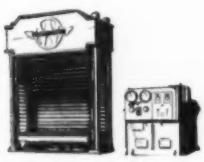


The Washington Trakloader made in a range of three sizes—Models TL-21, TL-15 and TL-11—with optional crawler or rubber tired mounting and choice of boom types and lengths.

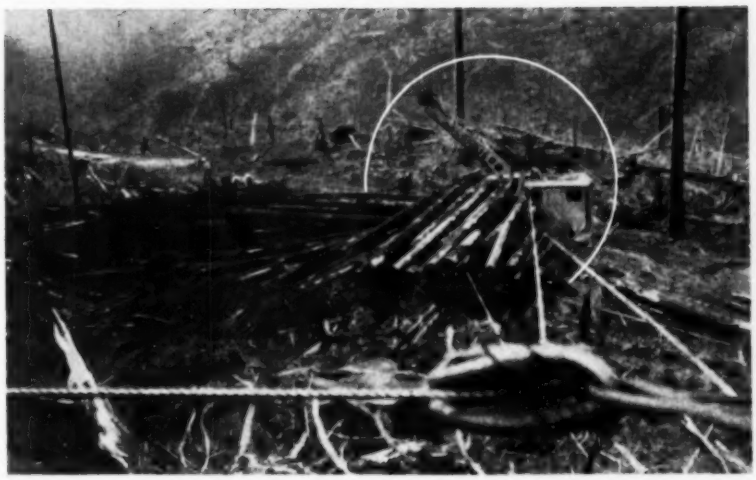
Yarders, featuring variable speed, torque converter models and four speed models; loaders, in a range of sizes, number of drums and power options.

Blocks and fairleaders, featuring roller bearing types—cast, forged, heat treated and machined under one roof.



Plywood, door and hardboard hot plate presses up to 7500 tons capacity.

Pulp baling presses, with automatic cycle control and rapid traverse for efficiency and high production.



Yarding with Trakloader Cuts Costs for Crown Zellerbach

Using 1⅛" mainline and double chokers, "highball" yarding with mobile Trakloader yields low cost logs . . .

CROWN ZELLERBACH Corporation utilizes a Model TL-15 crawler-mounted Washington Trakloader to full advantage for both yarding and loading, in logging operations at Sail River Camp, near Neah Bay, Wash. Logging manager is Charles Nichols.

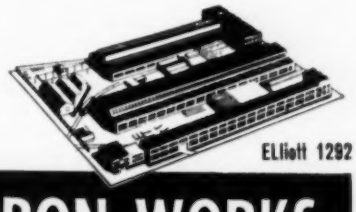
As shown above, Crown Zellerbach uses the Trakloader to consolidate skidder settings and eliminate expensive rigging up of spar trees for triple-drum cleanup of short corners and narrow strips. The Trakloader builds a pile of logs, then moves to the next location and repeats the performance. Even where setting is comparatively level, as above, the TL-15 with approximately 30-foot height to tip of boom does not experience excessive hang-ups. This is due to the fact that boom can be swung to change the direction of pull while yarding. When trucks are sent in to the spur, the Trakloader loads out the cold decks.

Harold Wilbur, superintendent, and Ed Stitham, woods foreman, have found that they can yard up to 150 hemlock logs per day with the TL-15 Trakloader. They fly two chokers on a 1⅛" mainline. By having the machine firmly guyed, they utilize the full power and speed of the Trakloader. The operator can "highball", bouncing through hangups.

A second Washington Trakloader will shortly go in service at Sail River Camp. Other divisions operate two more Trakloaders, making a total of four owned by Crown Zellerbach.

Get the Full Story

Three models of Washington Trakloaders are now available. An expert factory man or the Washington dealer nearest you will gladly arrange to show you color movies of the Trakloader in operation, and to supply up-to-the-minute data on price and delivery without obligation.



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WASHINGTON IRON WORKS

of large clears and timbers, are reserved for the plywood mill. The sawmill must now extend its clear order file with Hemlock, Spruce and Balsam, and large size timbers in quantity are no longer available.

Further changes in log supply arise from a decreasing log diameter as logging moves to higher elevations and as smaller logs are brought out of the woods; the decrease in Fir diameter being emphasized by the plywood absorption of a large percentage of the 20" and over diameters. Swede gang saws, with a reduced saw kerf, are desirable for small peewee cutting but have little flexibility for thickness selection. Small band mills, using thin-bladed saws, offer more flexibility and may be a better overall solution.

These developments, added to by the many years of over-cutting of Fir in proportion to its occurrence, are requiring a profound change in the traditional markets for Coast lumber. The market acceptance of hemlock, balsam and cedar for finished clears, boards and dimension is a vital factor in the success of integrated operations in the B.C. Forest Products industry.

Western Hemlock, one of the strongest and stiffest of the world's softwoods, is interchangeable with Fir for many structural uses, particularly with the availability of timber connectors permitting high stress utilization of dimension sizes. Extended drying facilities have now enabled the major mills to handle kiln dried Hemlock boards and dimension, which, combining high strength with low weight and low moisture content, offer many interesting possibilities in construction.

While the combination of expanded facilities with diversified order files have helped absorb other species and maintain or improve the lumber outturn, the major improvement in recovery from the log occurred with the addition of a pulp mill capable of operating on sawmill out-fall, followed by a chipper installation in the sawmill. This made available immediately a market for a further 9% of the log, merely by the selection of bark-free waste.

With capital expenditure for the hydraulic barking equipment which has become available in the last few years, this figure can be approximately doubled with use of a slab barker, and tripled with use of a whole log barker.

To find a profitable market for an additional 27% of the raw material intake represents, you will all agree, a tremendous step in integration. A step, however, which involves very large expenditure—of the order of $750,000.00 for a whole log barker and chipper installation—and is only practicable for a large sawmill with the assurance of many years timber supply.

Volume disposal of the log has shown some significant changes. In the original mill, operating individually on a timber stand, a M feet of log represented about 160 cubic feet. Lumber out-turn ran about 93 cubic feet, or about 58%. Of the remaining 42%, about one quarter to one half was used or sold for fuel and the remainder burned as waste. This burning of waste was in fact one of the largest operating problems.

In the present-day integrated sawmill, with a smaller average log size, a M feet of log intake represents about 175 cubic feet. The same lumber out-turn is now 53% of the intake, and with a whole log barker, pulp chip output as stated earlier can reach about 27% of the intake. Useful product output of the mill has then risen from 58% to 80% of the input.

The lumber out-turn shown above has been measured before dressing, that is by its nominal size. Dressing losses, appearing in the form of planer shavings, might average up to 30% of the rough size and reduce the solid lumber out-turn accordingly. While it is probable that consumer uses will develop for these shavings, they are now being burned for fuel and, in the case of construction grades particularly, it is likely that they would be of better service to the community if left on the lumber. If the construction industry can find it acceptable, accurate saw sizing of dimension, even if only on the flat sides, would stretch the log by over 20%.

Despite the changes in log supply noted, utilization, as measured by gross value of output, has improved as the volume of useful product increased. Taking into account the pulp mill conversion of its chips, the integrated sawmill, through the application of increased fixed investment and increased labour, is able to improve gross value of output by approximately 35%.

Wood waste available for boiler fuel has been reduced to about 20% of the log, supplemented by very wet bark and by planer shavings from such lumber as is dressed. New consumer uses for this remaining material—some already exist and others are under way—would tend to make the sawmill a purchaser of fuel or power or both. Even in the present and still imperfect stage of integration, the days of salvage of free waste are over.

THE PLYWOOD MILL

During the year of 1952, it is likely that about 12 to 13% of the Coast production of Douglas Fir logs went into the manufacture of rotary cut Fir plywood. In individual integrated areas, with suitable stands, this figure has approached 50%. When it is considered that this includes virtually all Fir logs with any amount of clears, the effect of the plywood mill on the integrated operation becomes evident.

The fir plywood business developed out of the demand for 3-ply for panel doors. It was not until the period beginning with the war years and the introduction of waterproof glues, with the tremendous broadening and diversification of markets that followed, that the plywood mill assumed its present important role in the integrated operation.

While volume recovery in a plywood operation is not much different from that in a sawmill, the gross value of product is considerably superior, and it represents a much higher form of utilization.

Plywood log usage has changed considerably since the early days, conforming to the change in log supply. Minimum diameter has dropped from 30" to 20" and will likely go lower. Grade usage is now apt to include 60 to 70% of No. 3 and No. 4 Peelers. Chunks and "sweep" logs find high utilization in the plywood mill.

The average M feet of log intake to the plywood mill, containing a large percentage of butt logs, represents about 150 cubic feet. An efficient plywood plant will convert about 83 cubic feet of this or 55% to plywood measured on the unsanded nominal basis.

About 9% is dropped from the lathe as a core and is available for conversion into ties, studding or pulpwood. As the veneer must be brought to virtually bone-dry, a further 6% is released as moisture.

This leaves about 44 cubic feet per M feet of log or 30% as waste of various forms. As the first operation on the mill floor is barking of the block, this waste is all bark-free and when of sufficient size and not contaminated is available for immediate conversion to chips. In practice, about 23% of the available 30% can be brought to chip form.

The remaining 7% is glue-contaminated waste, sawdust and jointer dust and generally goes to the hog. The glue-contaminated waste is available for chip conversion for some pulp operations where light

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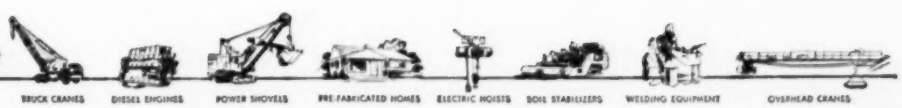

colour is not essential.

Overall volume utilization is fairly complete in the integrated plywood mill and the problem becomes one of obtaining the highest grade utilization, i.e. increasing the volume and grade of veneer obtained from the log. These efforts are spurred by the present high levels of peeler log prices.

Present trends in equipment and process design are tending to increased volume recovery by reducing core, trim and handling losses, and to increased grade recovery through improved patching and joining facilities.

So far there has been no serious volume of plywood manufactured from the other principal Coast softwoods. Both Hemlock and Balsam can be handled, with some extension of drying facilities, in Fir Manufacturing units but they do not develop the soft-textured face veneer available from old-growth Fir. Cedar is not generally suitable for rotary peeling and, while clear flitches can be handled in a slicer, the face veneer developing is too soft for many of the present Fir plywood uses. Second-growth Fir offers much the same problem in lack of fact stock as do Hemlock and Balsam.

There is now in evidence a trend towards the combination of lower grade veneers with various types of face overlays, chiefly plastic-impregnated papers and hardboards, utilizing the high strength of the core with the special characteristics of the faces. The lower grade veneers could, for most uses, be extended to include Hemlock and Balsam and, as the papers and hardboards noted above are both pulp products, the composite boards produced could be considered to be logical extensions of the integrated operation.

A considerable portion of the Fir plywood now produced is of sheathing grade, marketed for a large number of construction uses. Hemlock, with its high strength qualities, should be particularly well suited to this grade when required.

A common extension to the plywood is a flush door manufacturing unit. This serves as a high quality market for plywood and for small sizes of lumber factory grades which can otherwise be difficult to market.

As presently constituted, the plywood unit invests by far the greatest man-hours per M feet of log and develops the highest gross value of product. Taking into account the pulp mill conversion of its chips, the addition of the plywood mill to the integrated operation has improved the utilization of the peeler grades of Fir by about 275%.

This important gain to the economy of the Province is made possible through the provision of large fixed investment—on a log input basis, 4 to 6 times that of a sawmill—and through the application of approximately 4.2 times the labour to conversion of the log.

THE SHINGLE MILL

At present approximately 50% of the Coast production of Western Red Cedar logs goes into the manufacture of shingles. With the shingle mill operating as a unit of the integrated operation, these logs are mainly the tough-large-knotted type, and the surface clears and peewees go to the sawmill for manufacture into lumber.

High quality shingles can be taken from low grade logs by virtue of the characteristics of shingle manufacture which is a continual process of cutting to eliminate defect. The major log defects can be sawn out or split out in forming the block and the shingle is trimmed to remove edge defect.

With the production of a sawn unit as thin as a shingle, the saw kerf waste is necessarily very large, amounting to over one-third of the volume intake. When the waste from spalls and splints is added to this, it gives the shingle mill a lower product recovery than either the sawmill or plywood mill.

With the high taper common to Cedar logs, the average M feet of log entering the shingle mill represents about 175 cubic feet. The shingle out-turn in an efficient mill is about 72 cubic feet, or 41% of the input. Of the remaining 59%, sawdust is estimated at 35% with the spalls and splints making up the balance.

Utilization of this shingle mill waste has so far been limited to fuel, either as boiler fuel in the operating unit, or, through further processing, as a compressed form of consumer fuel.

Utilization of the shingle log input, as measured by gross value of product, varies widely with the market, but will be around 55% of that of the integrated sawmill, reflecting the lower grade of log used and lower recovery. Further manufacture of the waste to compressed consumer fuel can riase this figure to 60 to 65%.

Manufactured roofings have eaten into the traditional Cedar shingle markets, with Cedar-roofed buildings dropping from close to 50% to below 10%. The market trend appears to be to Cedar sidewalls, with the shingle mill supplying a pregrooved and pre-stained shingle, thus transferring part of the construction labour to the manufacturer.

These sidewall "shakes" are generally the equivalent of the No. 1 Perfection shingle grade but because of their large exposure, require considerably less volume to the square.

Efforts in the shingle mill today must inevitably be directed towards increasing the potential market, both for the primary product and for the out-fall.

THE PULP MILL

The present function of the Pulp Mill in the integrated operation is to convert to its highest possible utilization the out-fall from the sawmill and plywood mill and to provide an economic outlet for many logs unsuited to lumber which were formerly used for fuel or left in the woods.

As the Mature Coast stands are cut and the industry progresses to sustained yield operation on the second crop, the pulp mill can be expected to operate on an increasing percentage of whole logs, serving as the most economic utilization for thinnings and other material not of sawlog calibre.

The usual type of pulp mill which has been fitted into the integrated operation uses the sulphate process, producing unbleached or bleached kraft. This is a high-grade and desirable wood pulp which can be produced using up to 100% of sawmill and plywood mill waste as raw material. The pulp out-turn is of the order of 45 to 50% of the cubic foot intake with the balance, in the form of liquor and screenings, serving after further processing as boiler fuel.

Hardboard manufacture is another type of pulp operation capable of using sawmill and plywood waste. While, measured on a value basis, hardboard is of a considerably lower grade than kraft pulp, it has some desirable characteristics for the integrated operation. Chip requirements are less strict than for kraft, volume recovery is considerably higher, and capital investment is much lower. There is some evidence now that there may be room in the integrated operation for both kraft and hardboard, and recent developments in the United States involving the production of hardboard containing substantial amounts of bark may add to this trend.

Softboard, or insulated board, manufacture is also possible from

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sawmill and plywood mill waste but interest in this process as an integrated unit has apparently been superseded by kraft and hardboard. This lowering of interest is probably due to the lower value of the softboard out-turn, and the present large installed softboard capacity which would appear adequate for the known markets.

The emergence of the hydraulic barker has been an important factor in the success of the integrated pulp operation by allowing improved chip recovery from sawmill waste, from "wood" logs and from small whole logs. Full utilization will likely require a whole log barker for the main sawmill intake, a small log barker at the sawmill if peewees are going to be sawn in quantity, and, unless the sawmill is next door, a whole log barker at the pulp mill.

While there are instances where pulp producers, operating on whole logs, have acquired sawmilling facilities in order to expand the gross value of their timber, the usual pattern on the Coast has been that pulp facilities have been the last unit acquired, requiring many years of reinvestment of earnings from the primary producing units. The future trend however will almost certainly see the pulp facilities becoming the dominant unit of the integrated operation from the standpoints of both raw material requirements and earnings.

LOGGING

Integration of the forest products operation must necessarily make logging into a servant of its converting units.

The ability of the integrated operation to convert the various species and grades to their highest utilization can only be realized when the timber supply is balanced with manufacturing facilities and order files. While a Fir peeler inventory must be mantained for the plywood mill, market conditions may make it undesirable to log a proportionate amount of Fir sawlogs. Log supply is most flexible when the trees are still standing and the trend is to a reduction of log inventories.

These conditions, along with the gradual retreat to less accessible timber, have led to the conversion of the typical Coast integrated logging show from railroad to truck logging. This changeover, while involving large capital expenditure, offers some important advantages. With increased grades and sharper curves, less accessible areas can be reached. Tributaries to the main access roads can be put in fairly readily to reach any desired section. Maintenance costs are considerably lower than rail, permitting the logging show to take out only part of the timber when the road is first installed. Winter logging is generally possible, allowing the converting units to operate on smaller inventories. Large cold-decking is unnecessary, eliminating a source of degrade. Access roads are available for fire control.

For high utilization, log length becomes important, particularly for the peeler grades. The trend is now to the taping of logs ahead of the buckers.

The ecomonic recovery per acre is increased. The plywood mill, operating on an 8'6" block, allows the recovery of chunks and "sweep" loss, perhaps an additional M feet per acre. The Swede gang mill, using logs down to 6" diameter, may allow up to a further 4 M feet. If pulp mill capacity is in excess of sawmill and plywood chip supply, logging waste amounting possibly to another 4 M feet may be salvaged.

To illustrate the improvement possible in gross value per acre, two acres containing equivalent amounts of merchantable timber will be considered:

An individual Fir mill, cutting all the logs to lumber and burning the out-fall, operated as long as possible on highly selected stands, with perhaps a 50 M feet acre divided: 70% Fir, 15% Hemlock and 15% Cedar.

By contrast, the integrated operation is working stands in balance with its timber reserves where a typical acre might have: 20% Fir, 42% Hemlock, 15% Balsam and 23% Cedar, making up the 50 M feet.

It is possible to add to this: 1 M feet Plywood salvage, 4 M Gang Mill salvage and 4 M Pulp salvage, raising the total yield of the acre to 59 M feet.

Although operating on an acre with a much lower proportion of Fir, the integrated operation, through its ability to increase the volume yield and to direct all material to its best conversion, is able to raise the gross value of product per acre by approximately 70%.

The move to balanced cutting of species was inevitable and this large increase in avialable yield per acre is, to a competitive industry with high labour costs, high log prices and increasing stumpage, the spur to the drive to integration.

This can be considered equivalent to a similar increase in the life of the mature forest resources. In addition, integration has meant the investment of many millions of dollars in converting units, followed by a large expansion in employment. All these effects are tremendous contributions to the economy of this Province and to all of Canada.

Northern Hemlock and Hardwood Annual Meeting

At the recent annual meeting of the Northern Hemlock and Hardwood Manufacturers Association, held at Land o' Lakes, Wis., the following officers were elected:—

President—Robert W. Lyons, Wm. Bonifas Lumber Company, Neenah, Wisconsin.

Vice-President—C. D. Zagelmeier, Michigan Pole & Tie Co., Newberry, Michigan.

Treasurer—W. W. Gamble, Jr., Yawkey-Bissell Hdwd. Flg. Co. White Lake, Wis.

Secretary-Manager—O. T. Swan, Oshkosh, Wisconsin.

Directors—Paul Abendroth, Robbins Flooring Co., Ishpeming, Mich.; Ray Aldridge, Ray Aldridge, Inc., Mohawk, Mich.; Louis Buchsieb, White River Timber Company, Bergland, Mich.; P. C. Christiansen, C. M. Christiansen Company, Phelps, Wis., A. R. Copeland, Copeland Lumber Co., 135 S. LaSalle, Chicago, Ill., A. J. Erickson, Cleveland-Cliffs Iron Co., Negaunee, Mich.; Sawnde Godell, Chassell Lumber Co., Chassell, Mich.; C. E. Good, Bay de Noquet Co., Nahma, Mich.; F. H. Himes, The Himes Company, Inc., Crandon, Wis.; J. Hobelsberger, Roddis Plywood Corp., Marshfield, Wis.; Armin Knoke, Knoke Lumber Company, Appleton, Wis.; Juel Lee, Birds Eye Veneer Co., Escanaba, Mich.; M. C. McIver, Penokee Veneer Company, Mellen, Wis.; Fred Menzner, Menzner Lumber & Supply Co., Marathon, Wis.; S. E. Venne, Atlas Plywood Corporation, Gladstone, Mich.

BUREAU CHAIRMEN—(Ex-officio—members of Board). **Bureau of Conservation**—John M. Bush, 133 E. Main St., Negaunee, Mich.; **Bureau of Economics**—A. E. Swanke, Tigerton Lumber Co., Tigerton, Wis.; **Bureau of Grades**—George Houghton, Goodman Lumber Co., Goodman, Wis.; **Bureau of Legislation**—John Boehm, Lake Linden Lbr. Co., 161 W . Wisconsin Ave.; Milwaukee, Wisconsin; **Bureau of Marketing**—Abbott M. Fox, Abbott Fox Lbr. Co., Iron Mountain, Mich.; **Bureau of Transportation** — Gordon Connor, Connor Lbr. & Land Co., Wakefield, Mich.

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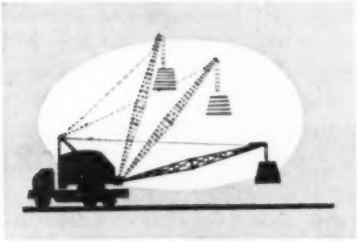

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Boise, Idaho Falls, Idaho, Spokane, Wash.

Air Powers Setworks in Idaho Mill

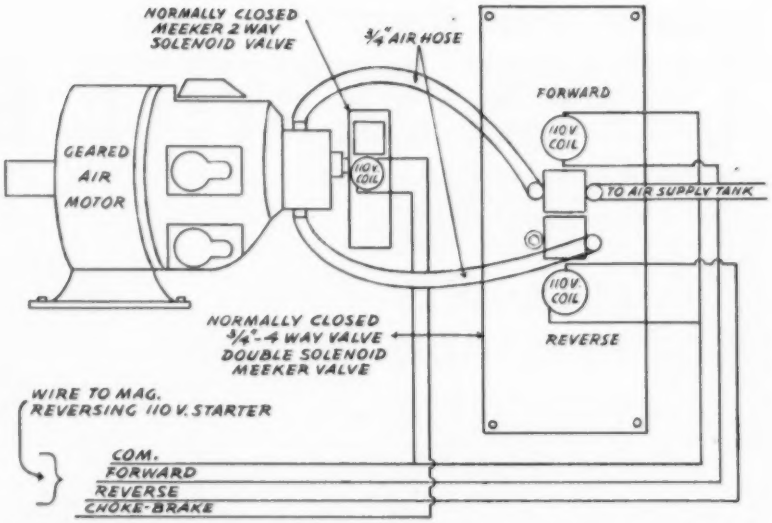
Linfor Lumber Co., Kellogg, Ida., specializes in cutting timber and lagging for use in mines located in this mountainous area. Its double circular sawmill embraces some unusual features which contribute to the quality of products produced and to general success of the organization.

Headrig and carriage are jointly powered by a 2300-volt Westinghouse 175 h.p. 435 r.p.m. motor driving through 8-strand D-size Gates V-belt. This motor, with more than adequate power for the job, was designed and built for specialized mine use.

Of particular note, the setworks built by Linfor Lumber, is powered by a 5-cylinder 54 r.p.m. Eimco air motor hooked with control equipment to provide rapid set-up action, stop precisely at pre-set point, and hold to that position until controls again activated. D. C. Morbeck, sales manager and a partner of the organization, reports the setworks to be unusually satisfactory. He says the unit is accurate to within 1/32 in. tolerance and maintains set position until changed via the controls.

Valves Control Stops, Starts

The air motor powering the setworks has hook-up arrangement, according to Morbeck, developed by Ted Balch, Salem, Ore. sawmill designer.



SOLENOID VALVE ARRANGEMENT and wiring for controlling air motor set works when using pre-determined remote setting as designed by Ted Balch & Associates.

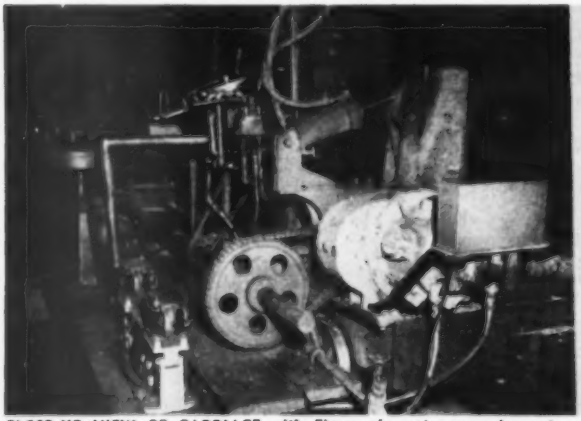
Two Meeker valves (Dallas, Ore.) control starting and stopping of the Eimco air motor. One of these, a straight-way solenoid control valve, hooks to the motor auxiliary exhaust for the purpose of stopping the motor and retaining that position until reactivation. The other valve, a 4-way Meeker motor valve with solenoid controls, has air lines leading to the motor intakes.

With this arrangement, the choke valve (4-way) simultaneously opens the appropriate exhaust port from the motor as the motor valve releases compressed air to motor intake. The impulse which shuts off air to the motor also shuts off motor exhaust ports by means of these two valves. Except when the compressed air flows to the motor (at which time the exhaust is open), the closed exhaust ports prevent creeping, thus maintaining precise position of the Setting.

Motor Gives Different Speeds

The Meeker motor valve has adjustable exhausts, whereby differential setting can be made for operating the Eimco motor at more rapid speed in reverse (for retrieving set) than obtained when moving the log or cant into the saw.

A Chicago-Pneumatic 165 cu. ft. compressor furnishes compressed air for the mill. Salem Equipment & Supply Co. furnished friction type feedworks, deck air arm and carriage flipper. Manufacturing facilities behind the headrig include a 48 in. Union Iron Works edger, using 24 in. saws, powered by 75 h.p. U.S. electric motor and an Irvington 24 in. straight-line 3600 r.p.m. cut-off saw.



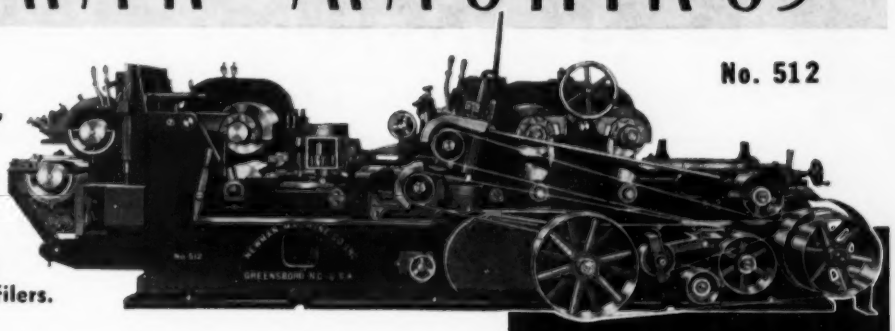
CLOSE-UP VIEW OF CARRIAGE with Eimco air motor powering setworks and two Meeker valves precisely controlling the air motor, keeping sets within 1/32" tolerance. Note that cover has been removed from one of the Meeker valves to show construction.

FRONT END of the mill equipped with Salem Equipment & Supply air deck arm, air carriage and mechanical feedworks. Facilities behind the headrig include a 48" Union Iron Works edger, U. S. Electric Motor and an Irvington cut-off saw.

NEWMAN MACHINES

Newman

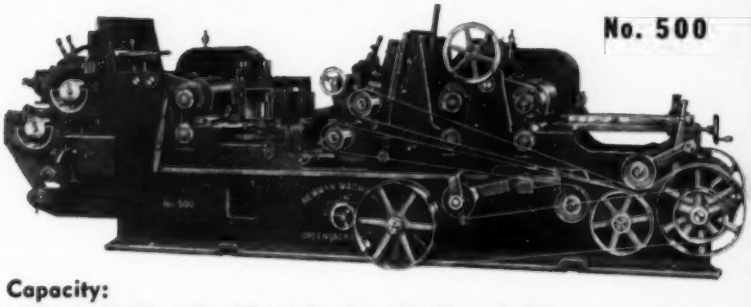
No. 512



Capacity: 16" and 24" wide, 8" thick.
Speeds up to 325 feet per minute.
8" dia. cutting circle.
Six 12" dia. feed rolls.
Single and double profilers.

BALL and ROLLER BEARING PLANERS AND MATCHERS

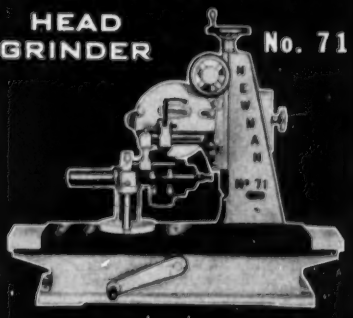
No. 500



Capacity:
14" and 24" wide, 6" thick. Speeds 40 to 200 feet per minute. 7" cutting circle. Six alloy steel feed rolls. High carbon special alloy steel cylinders. Single or double profilers.

The ball bearing NEWMAN 71 (shown below) will grind all sizes of cutter heads. Table is 33" long by 9" wide with horizontal travel of 25" and is heavily ribbed to maintain accuracy over entire travel. Maximum cutter head swing is 11".

HEAD GRINDER **No. 71**



ORDER NOW FOR EARLY DELIVERY

ALL NEWMAN cylinders or heads are DYNETRICALLY BALANCED insuring an accurate and superbly finished product.

Ball and Roller Bearings

No. 55 AUTOMATIC PINEAPPLE FEED TABLE

The NEWMAN 55 feeds stock automatically to high speed planers and matchers up to 450 lineal feet per minute. Capacity: 30" wide, 8" thick. All adjustments and controls are centrally and conveniently located.

No. 8-B PLANER, MATCHER AND MOLDER

Unsurpassed for work in small and medium mills

The NEWMAN 8-B planes 22" wide and 8" thick, joints 4" thick and will match 14" wide. 6" diameter feed rolls. Speeds of 30, 50 and 75 feet per minute.

MAY WE SEND YOU FULL DETAILS?

NEWMAN MACHINE COMPANY, INC.
GREENSBORO, NORTH CAROLINA, U. S. A.

HARDBOARD— IT IS AN EXCITING MATERIAL

BY PAUL B. SHOEMAKER

Vice-president Masonite Corp., and Secretary-Treasurer of the Hardboard Association

(NOTE—This article by Mr. Shoemaker of the Masonite Corp. was written especially for the hardboard section of THE LUMBERMAN Review Number published March 25; unfortunately it was received just after the press deadline for the Review Number. We believe readers will find Mr. Shoemaker's report for hardboard is just as timely for this regular issue.—The Editor.)

If a phrase could be designed to describe the reaction of those who write about hardboard and its place in the building and industrial markets, that phrase would be "Hardboard is an exciting material!"

The financial writers, security analysts, brokers and bankers refer to manufacturers of hardboard as a "growth industry."

The consumer, the hobbyist, housewife and home owner find a high utility value in hardboard as a multiple use product for the home. "Fascinating and intriguing" is the description penned by the writers and voiced by the commentators for the shelter and "do-it-yourself magazines."

Many Problems to Meet

Industrial uses are myriad. The copy writers and the editors who beam their stories to industrialists quickly state their position by writing, "You can use hardboard too. Look to hardboard for new industrial applications and values."

The hardboard industry, like any other growth industry, faces many problems inherent in its growth cycle. The impact of many new producing units in a short period of time has developed a temporary capacity cycle out of gear with demand. The start up phase of each new producing plant presents the immediate need for orderly distribution.

Foreign Imports Stimulated by Shortages

Past periods of shortage have encouraged sizable importations of foreign hardboards whose importers are today fighting for continued sales and because of this action are providing a changing element in the market. The answer, of course, to these perplexing problems is greater emphasis on new uses of hardboard.

The newly formed Hardboard Association started with an informal technical committee. This committee met over a period of many months with the common objective of developing a broader base for hardboard through research and greater technical knowledge. With the forming of the Association as an industry unit, one of the major objectives has been established, to develop a greater over-all demand for hardboard. Obviously, a broad demand horizon for the industry is a sound answer for the new capacity problem.

Industrial Applications Increase

In approaching commodity stature, as compared to its previous specialty classification, hardboard now bids for greater percentage of the home owners' dollar both in new and remodel housing construction. New industrial applications for the product have materially increased volume in many industries as industrials feel the pulse of this growing commodity and recognize its value.

The 1953 building and industrial market weather vanes point to an increasing demand for hardboard. With many major uses of the product virtually in their infancy, hardboard manufacturers are merchandising and selling on individual brand identification. This approach underwrites sound and stable long range practices.

'Commodity' Position Predicted

New selling messages in trade and consumer magazines initiated by new producers and continued by old line manufacturers are acquainting the public with the many intrinsic values and uses for each manufactured brand of hardboard. Publicity stories, radio and television are also building demand for hardboards.

It is an inevitable fact that hardboard will soon reach a strong commodity position as members of this billion plus footage industry increase the impact of their new sales and educational messages each month and each year.

Willamette Logging Conf. Set Apr. 23-25

Western Oregon loggers will converge on Eugene, April 23 for a three day-session of the annual Willamette Valley Logging Conference, with the planned theme of "Better Utilization."

A varied and interesting program is being arranged. A colored film entitled "Utilization," prepared by Bert Thomas of Valsetz Lumber Co., will be shown; Acting Dean of the School of Forestry at Oregon State College, Dr. Walter F. McCulloch, will speak.

Meeting in New Building

The 1953 meeting is to be held in a new building at the fairgrounds, where ample space will allow what may be the largest exhibit of logging equipment ever shown at the conference. A large attendance is anticipated, due to the increased seating capacity and display space. A power saw bucking contest is planned.

Wilfred Laird of Griffey & Laird Logging Co. is president; A. D. McReynolds of Giustina Bros. Lumber Co. is secretary; and Carwin Woolley, secretary manager of the Pacific Logging Congress, is assisting with the program.

A list of the exhibitors up to press time numbered over 30 and was as follows:

Balzer Machinery Co.; Berger Engineering Works, Inc.; P. L. Crooks & Co., Inc.; Cummins Diesel Sales of Ore., Inc.; Electric Steel Foundry; Farm & Industrial Equip. Co.; Feenaughty Machinery Co.; First National Bank of Eugene; Flegel Transfer & Storage Co.; Foster Power Saw Co.; Gunderson Bros. Engineering Corp.; Hall Heavy Hauling Co.; Hanchett Manufacturing Co.; Howard-Cooper Corp.; Hyster Co.; International Harvester Co.; International Harvester Co.—Truck Div.

Interstate Tractor & Equip. Co.; Kendall Motor Co.; L-M Equipment Co.; Loggers & Contractors Mach. Co.; Lorence Co., Inc., Ed.; Mock & Sons, E. A.; Page & Page Co.; Peerless Trailer & Truck Serv.; The Peters Co.; Pierce Trailer & Equip. Co.; Roebling's Sons Corp., John A.; Robert Cross Insurance, Scarlett, A. B.; Shell Oil Co., Inc.; The Texas Co.; Willamette Iron & Steel Co.; Wood Tractor Co.; Young Iron Works; Sparks-Wills, Inc.

Specialized Logging Tires Pay Their Own Way!

Highway Mileage and Off-Road Traction ...Now Combined in One Great Tire!

Yours now — the full economy of all these Gillette Super Traction advantages!

★ **Extra original mileage** from new, deeper specialized "logging" treads—with 74% more undertread.

★ **More and better recaps** with advanced rayon construction.

★ **New log-service traction**—70% more tread at shoulder — deeper, huskier cross lugs — new "extra-bite" open center design.

A Bear for Wear

GILLETTE TIRES

DIVISION OF UNITED STATES RUBBER COMPANY

Industrial Application

Plywood and Metal Surfaces Bonded In Phone-booth Construction Plant

Assembly-line production with synthetic resin adhesives is a much cherished goal. Another sought-after attainment is the succesful lamination of materials with differing, or uneven, stresses. It is a matter of unusual interest, therefore, when both these things are accomplished in one successful, working, operation. And that is exactly what has happened at the Queensboro shops of Western Electric Company, Middle Village, New York, where metal is being bonded to wood using straightflow, assembly-line techniques.

Western Electric is the world's largest manufacturer of telephone booths. The modern indoor telephone booth is metal-lined for durability, has place to write, and has adequate lighting and ventilation equipment. Some have a place to sit. It must be as comfortable as 2½-foot-square quarters can be, and it must be durable. So in working out its construction problems Western Electric selected plywood for wall surfaces for its structural strength and stability and chose to line it with a light porcelainized metal surface to resist the inside battering and scratching that a booth gets.

The problem, then, became one of finding a laminating medium which would stand up under the differing stresses of wood and metal and could still be applied with assembly-line speed. There are many excellent synthetic resin adhesives on the market, but until recently Western Electric had found none that would do all the things required of it. So when they found it, the adhesive and the assembly-line for applying it went in together.

THE ADHESIVE

The adhesive presently being used by Western Electric is Armstrong Cork Co.'s D-235. It is not by any means the first formulation developed by Armstrong or used by Western Electric, but comes as the result of considerable experimentation and assembly experience. And it is felt it now comes up to the dead load and fatigue resistance requirements for high pressure laminating of metal to wood.

The D-253 formula includes neoprene rubber and synthetic resins of a thermostatic type. The resulting adhesive is said to combine some of the characteristics of the thermosetting resins in catalyzing finally under heat and pressure, but still retaining enough of the thermoplastic qualities of neoprene rubber to make it workable under the assembly line so that it will conform and not break under the uneven stresses to which it is subjected in aging between wood and metal.

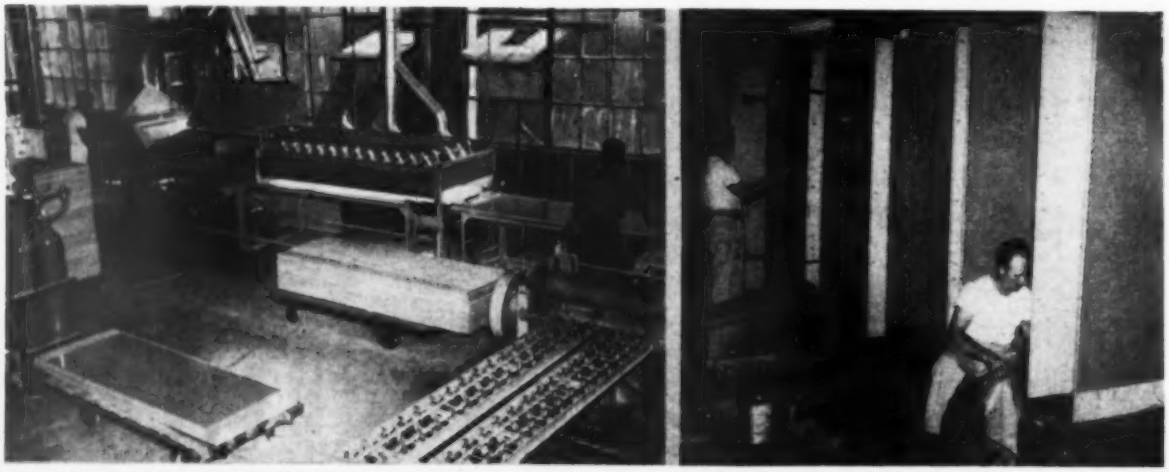
THE ASSEMBLY LINE

The operation at Western Electric is compact and simple. The raw materials for the telephone booth panels consist of 2½ x 7-foot panels of ¾-inch, 5-ply interior grade Douglas fir plywood, of a rolled covering sheet of porcelain covered metal, and of the adhesive. The equipment consists of glue applicator rolls, canvas conveyor belt, a bank of infra red lamps, a simple jig, and two final pressure rolls. The whole set-up occupies a space not over 3 feet long and 15 feet wide and takes only two men to operate.

In the operation, the metal sheets are fed through applicator rolls for spreading the adhesive. This equipment was especially developed for this job by Potdevin Co. Feed to the rolls is by a DeVilbiss Co. adhesive pressure feeder. The rolls are serrated for application to metal so that the tacky glue won't have too great an affinity for the metal sheets.

The coated side of the metal travels up on the canvas conveyor belt through a bank of 48 250-watt infra red General Electric reflector lamps. Hoods over the line from the glue spreader through the lamps vent the released solvents from the adhesive to the atmosphere. Each panel is under the lamps for about ¾ of a min-

(Continued on Page 92)



Left—OVERALL VIEW OF THE ASSEMBLY LINE at the Queensboro shops of Western Electric Company at Middle Village, New York for the lamination of metal panels to plywood in the manufacture of telephone booths. Metal panels are fed into the equipment at left background; adhesive is applied and set under the lamps in the center; are positioned on the plywood at right; and then come through the pressure rolls and are delivered in the foreground. Right—Here the panels are on the final assembly line where the telephone booths are made up. At this point floors are being added to the back and side panels which have had the metal facings bonded to the wood.

It's a Fact — EVERY G-E 2-WAY RADIO CRYSTAL IS TESTED FOR DRIFT AND ACTIVITY FROM MINUS 22 TO 185 DEGREES FAHRENHEIT

THE all-important crystal supplied in your G-E 2-way radio equipment earns a performance diploma that more than qualifies it for the rugged service you demand in communications. Subjected to testing in the complete range from sub-zero to "hands off" temperatures, the crystal is painstakingly checked for frequency drift and activity. Crystals which drift more than *two-thousandths of one percent* are rejected! Those which fail G-E's stringent activity tests are also discarded.

G.E. starts crystal manufacturing process with x-ray selection of only the finest, faced Brazilian quartz and, in the final assembly, employs cleaning methods that are unique in the industry today. This somewhat lavish and exceptionally thorough preparation is justified by the key position crystals occupy as the *heart of 2-way radio and microwave equipment!*

The end result is a crystal which is typical of the high-quality components used in G-E equipment—units that are sought after not only for *performance* but for *low maintenance costs . . . economy of operation.*

Production facilities for G-E crystals are geared to supply this superior product to manufacturers who demand quality crystals for other uses. Write for complete information: General Electric Co., Section 2343, Electronics Park, Syracuse, N.Y.

Call the nearest G-E office for data on this outstanding communications equipment—

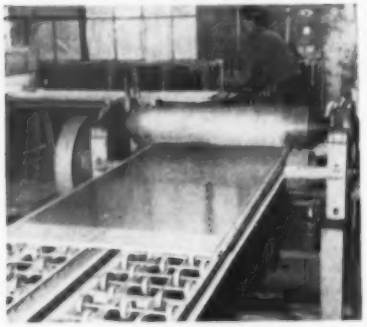
Dallas, Texas	Denver, Colorado	Washington, D.C.	Daytona Beach, Fla.	Cincinnati, Ohio
Houston, Texas	Kansas City, Mo.	Boston, Mass.	Detroit, Michigan	Chicago, Illinois
Tulsa, Okla.	New York, N. Y.	Atlanta, Georgia	Columbus, Ohio	Indianapolis, Ind.
New Orleans, La.	Syracuse, N. Y.	Charlotte, N. C.	Pittsburgh, Pa.	Minneapolis, Minn.
Los Angeles, Calif.	Philadelphia, Pa.	Montgomery, Ala.	Cleveland, Ohio	St. Louis, Mo.
San Francisco, Calif.		Seattle, Wash.	Salt Lake City, Utah	

Follow the trend . . . replace with G.E.!

GENERAL ELECTRIC

Phone-Booth Construction

(Continued from page 90)



THE PROPERTIES OF THE ADHESIVE are such that good contact is maintained between the metal and wood panels until they are fed, in position, through this pressure roll. The bottom feed roll is metal and the top pressure here is rubber. Notice particularly how the operator needs only swing the panel around from the first line to feed through this pressure line.

ute and is subjected to a temperature of about 140°F. The forced drying releases the solvents, and tackifies the film so that it acquires good contact and strength characteristics.

On coming out of the oven the metal panel is flipped over into place on top of the plywood panel and is matched into position by a wooden jig. The contact of the adhesive side of the panel with the wood is enough to hold it in place so that it can immediately be run through the pressure rolls. Heavy pressure is applied between the bottom metal roll and the top rubber roll.

In less than three minutes the panels have traveled on a continuous line through the whole operation, with only two men needed to handle, and are complete.

OTHER APPLICATIONS

Western Electric's work is interesting not only for what has already been accomplished but for what further may be accomplished with resin adhesives of this and similar types. They are already experimenting with other wood to metal bonded applications, and such further use may soon begin to appear in telephone booths throughout the country.

Lumber and plywood manufacturers know the need for a wider range of wood use and the fields that are opened up when the economic advantages of assembly-line techniques are possible. It has already been suggested that the new adhesive of Armstrong's and similar types might be of use for applying "facing" materials to Douglas fir plywood, since it is said that the material is non-penetrating, and therefore would not have the tendency to raise the grain—a familiar trouble to all manufacturers.

TIMBER NOW ELIGIBLE FOR MORTGAGE LOANS

The Travelers Insurance Company has pioneered a program of mortgage investments promoting the commercial growing of trees.

The company's general policy is still in the formative stages, but what are believed to be the first long term mortgage loans of substantial amount on timberlands were made by The Travelers on southern pine in the spring of 1950.

The loans were made only after exhaustive investigation of the future of timber as a crop. They were prompted by interest in a growing industry with a promising future and the company's desire to further diversify its mortgage investments. It is also apparent that such investment in specified areas of the nation can do much toward redevelopment of those areas with resulting profit to the country.

Careful growing of trees as a commercial farming proposition is not new. The products of lumber and pulp are profitable and necessary. In recent years, the activity of the publishing, textile, construction, container, and chemical industries as well as other trades using kraft paper has brought attention to development of American woodlands. In turn, modern methods of management and protection have encouraged investments in such projects.

The Travelers investments so far have been confined to the southern pine belt, and to the pine, Douglas fir and redwood regions of the Far West. Loans have been made only when proven timber management, fire control, and an attitude of aggressive progress for the industry prevail. Where there has been a transformation from a destructive to a constructive program of use and management of this natural resource, The Travelers has reached the conclusion that sustained yields of timber crops and long term financing go hand in hand.

Loans which have been made have ranged in amounts from $100,000 to more than $1,000,000. They have gone to operating companies and to individuals on a highly selective basis. Terms range from nine to 20 years, depending on the case at hand and the type of financing required. Repayment plans have been adapted to the operations, with annual, semi-annual, quarterly or monthly payments as is best suited.

Three factors existed wherever a long term mortgage loan was made. There was a satisfactory interest rate, a qualified borrower, either individual or corporate with a background of successful operation and timber management, and, as security, timberlands located in an organized fire control district with an approved program of management and a satisfactory location with respect to access and market outlet.

So far as the timber industry is concerned, The Travelers believes that justifiable purposes for use of credit include land and timber acquisition; land or plant improvement; expansion; inheritance taxes—eliminating liquidation; and extending short term obligations over a longer period—if extension will assist in conservation or in reaching a sustained yield program.

About the future, The Travelers has no plan for committing a set portion of its assets to investments in timberlands, but several million dollars in loans of this type already have been approved. "Naturally," the company says, "future policies will evolve from the success of the business already developed, continued study of the industry, the trend of prices, the types of loans that become available and the interest rates offered as compared to other investment opportunities.

"The Company is grateful to the many business and professional men in forestry and related industries who have displayed keen interest in this program. Continued cooperation among Federal, State and privately employed men in this field can do much toward insuring an uninterrupted flow of private capital —investing in the future of our natural resources and our nation."

Markets White Pine and Spruce Sawdust

White pine and spruce sawdust is being shipped by W. W. Powell Co., Ltd., at Nelson, B.C., to Specialty Wood Products, Inc., Spokane, for the manufacture of wood flour to be used in the production of light colored plastics of various kinds and cosmetics. Five carloads of sawdust are being delivered every week. The final process is carried out by Durez Plastics Co. at North Tonawanda, N.Y. The sawdust must be right from the machines and thoroughly dry, so it is pumped direct from the plant into waiting box cars.

Why not *own* an End-Trimmer? You're *paying* for one!

YOU LUMBERMEN take a lot of pride in the lumber you produce. That pride is well earned. From the minute the saws take that first slice at the log until the lumber is on the dock, ready for shipment, you are confronted with responsibilities of producing it not only economically, but also competitively.

But have you forgotten something?

Like the little boy who combs his hair, tidies up his clothes, yet comes to the dinner table with a dirty face—it's easy to miss a mighty important mill operation . . . SMOOTH-END TRIMMING.

The ends of your lumber, like the boy's face, is what your customer sees first—the basis on which he judges the appearance of all your lumber. It is often a *lasting impression.*

Now, you say, get to the point. What has this to do with your paying for an end-trimmer? Smooth-end trimmed lumber, so smooth it looks surfaced, is often the point that puts across the sale of one mill's output over competition.

It makes lumber easier to sell—to your customer, and to his customer. Consequently you have an opportunity for faster turn-over. Your wholesalers and buyers will take greater pride in selling and accepting it at its end-surfaced value. You'll be proud to have it bear your name. An end-printer can be supplied or added to the IRVINGTON No. 66 to do just that—choice of trade or other letter designations, too.

Add all these points up and tally on: less freight, weight, no handling of lumber that will be trimmed off ultimately—and you've got yourself a nice sum that you *could have been applying against* cost of your No. 66 trimmer.

And since you're paying for a trimmer, it's just good business to own the best—an IRVINGTON No. 66 Automatic Random Length End-Surfacer. Don't be misled. The No. 66 doesn't cost any more than competitive makes. Sure, it looks like more trimmer—it is. And you'll be surprised, like many other lumbermen, how downright competitive the IRVINGTON No. 66 is against other makes.

The pay-off is in the extras you get with the No. 66 streamlined machine. It's a self-sufficient trimmer with a box frame that gives "extra" strength, dust collection hoods that melt right into the design of the machine, cradle suspension saw ladders for featherweight rise and fall, individual saw power and selective controls all centered in easy reach of operator. There are many, many more features and facilities of the No. 66 that are just as important; and we would like to tell you about them.

Write or phone us. We would like to furnish you with full information on the IRVINGTON No. 66 Trimmer, and give you the cost of an installation in your plant.

If you're paying for an end-trimmer anyway, why not own the best—an IRVINGTON No. 66.

●

We will be happy to send you just for the asking an illustrated folder on the IRVINGTON No. 66 End-Surfacer and the 202 End-Printer. Drop a line to Irvington Machine Works, 1808 N. E. Seventh Ave., Portland, Oregon.

Irvington
MACHINE WORKS

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CONTINUOUS TAPING

EVANS PRODUCTS CO. DEVELOPS NEW MACHINE WHICH REDUCES HANDLING TIME AND INCREASES OUTPUT.

Imagine feeding two veneer sheets to a taping machine and having them unified by taping, straight-edged to specific predetermined width and loaded onto pallet behind the machine—all in one continuous operation with no handling other than feeding taping machine. Evans Products Co., does this at its Coos Bay, Ore. plywood plant with off-bearing equipment conceived, designed, and built by personnel of the organization. Besides reducing amount of handling, this set-up has increased output from taping machine some 10 to 15 per cent, according to Howard Bullard, Evans engineer.

Bill Winkle, plywood plant foreman, conceived the idea of having rip saw behind the Dennis taping machine. He and other personnel worked on the idea until they came up with the present production machine.

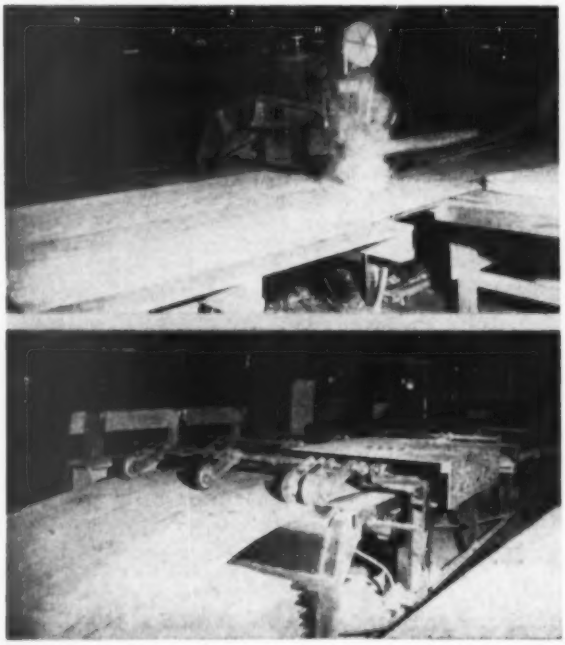
The unit, operated by one man who feeds the veneers to taping machine in conventional way, sets in line with and immediately behind the Dennis taper. As sheets are taped they move onto steel bed of the off-bearing component, the veneer sheet transported entirely by taper until lead end of veneer reaches a roll on which ride two rubber tired hold-down wheels.

There are five such rolls in the off-bearer. Top of each roll is at approximately same level as top of machine bed and each roll has rubber tired hold-down wheels. Veneer sheets coming between roll and hold-downs are pressed against the live rolls, thus causing the veneer to travel longitudinally at rate determined by periphery speed of the rolls. Hold-downs on last four rolls are continuously in pressure position, those on first roll intermittantly.

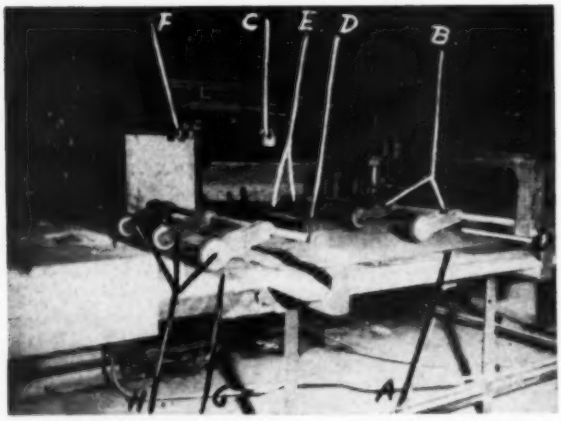
A veneer sheet engaged by #1 roll and hold-down continues its longitudinal movement until breaking lightbeam of electric eye controlling the hold-down wheels on #1 roll. Breaking of the beam causes these hold-down wheels to be lifted clear of veneer, thus discontinuing friction between veneer and power roll and the veneer stops its longitudinal travel. However, interruption of this lightbeam causes two mechanical actions rather than just one. Besides lifting #1 hold-down, two live chain-driven rubber-covered wheels (mounted at right angle to hold-down wheels) drop onto the veneer and pull the sheet sideways until it bumps up against a line-up bar. At that point a second electric eye is activated when the veneer breaks its lightbeam. This results in restoring the machine's transport components to same position as they were before first electric eye was activated—#1 hold-down drops onto the veneer and the lateral puller wheels lift off the sheet. Consequently the veneer, now shifted to the side and lined up, continues its longitudinal travel and the lead end immediately engages #2 roll and its hold-down.

From this point veneer sheets travel in straight line. The sheet, while held and transported by rolls 2 and 3, engages the rip saw which cleanly cuts the random edge (opposite edge of veneer from line-up-bar side), converting the veneer to specific predetermined width. Rolls #4 and #5 are behind the saw. The latter roll, located at extreme end of machine bed, discharges the prepared veneer onto a pallet, stacking each successive sheet on top of the previous ones until building up a load which is removed by lift truck.

Veneer is prepared for taping by placing several pieces at a time in a mechanical "jigger", this also designed and built by Evans personnel, to bring one edge of each into a common plane. The batch is then removed from jigger and straightedged by a Frank Diehl jointer.



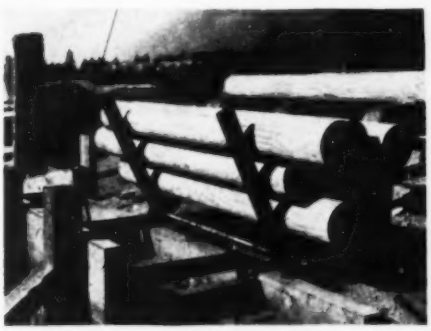
LEFT TOP: Dennis taping machine unifies two pieces of veneer. BELOW: Veneer discharging from off-bearer, after having been cut to specific width by ripsaw mounted under plywood guard, automatically stack on pallet in foreground.



ABOVE: Line-up section of off-bearer. No. 1 roll (A) with hold-down (B) longitudinally transports veneer until sheet breaks beam of electric eye (C) resulting in lifting No. 1 hold-down and dropping chain-driven rubber-tired wheels (D) which move veneer against line-up bar (E) thusly breaking lightbeam of second electric eye (F), this resulting in dropping No. 1 hold-down and raising powered shift rolls. Aligned veneer then moves between No. 2 roll (G) and hold-down (H).

Acme Steel Strapping Insures S.A. *(Safe Arrival)*

Saves labor, cuts loss of cores for British Columbia Forest Products, Ltd.



1 Peeled cores roll into V-trough. Each core is 7′ long, 8″ thick.

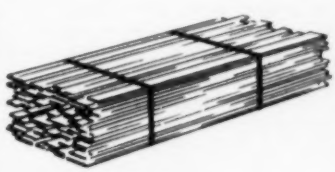
2 Cores are quickly double-wrapped with ¾ x .035 Acme Steel Strapping

3 Bundles of ten cores each slide into water, ride high for a safe trip to mill.

You may be surprised that Acme Steel Strapping can insure Safe Arrival of logs floating in water, but it does, up in British Columbia.

British Columbia Forest Products, Ltd., peels veneer logs down to the core, then straps cores together in bundles of ten before floating them to the mill. Bundles are handy for boommen to walk on, whereas single cores were too small and not buoyant enough, were subject to loss when moved in booms.

This is only one example of how Acme Steel Strapping helps lumbermen. You can also save time, money and labor by bundling boards together so they can be handled with mechanical lift trucks instead of expensive manpower. All along the line, from forest to lumberyard, Acme Steel Strapping can serve and save for you. For complete information, or a no-obligation consultation, write Acme Steel Products Division, Dept. L-43, ACME STEEL COMPANY, 2840 Archer Avenue, Chicago 8, Ill.



ACME STEEL

STRAP IT . . . STITCH IT . . . SHIP IT . . . SAFELY!

Former Frost Lumber Interests Being Streamlined by Olin

Touring of West Coast plants by an executive of Olin Industries, Inc., does not mean construction of a new sawmill but rather possible improvement of existing ones at Huttig, Ark., Mansfield, La., and Nacogdoches, Texas, according to company sources. F. H. Wilson, formerly manager of Union Sawmill Co., Huttig, Ark., a Frost Lumber Industries subsidiary acquired by Olin, promoted to production manager after acquisition and now retired, but a consultant, spent five weeks looking over a number of efficient West Coast mills.

Olin Industries, Inc., of which John M. Olin is president, acquired Frost Lumber Industries, Inc., Shreveport, La., by stock exchange in January 1952. At that time Frost operated five sawmills with aggregate production of 30M feet per hour, a flooring plant, and a treating plant. Production from these mills aggregated 80 million feet in 1951 of which 65 percent was pine. More important than lumber producing facilities was a very substantial forest land acreage, more than 200,000 acres in Louisiana and Arkansas and with good holdings in Texas. In all 450,000 forest land acres were acquired.

Key Positions Filled

Subsequently successive steps have been taken to streamline the new acquisition into the Olin Industries. Robert H. Evans, formerly an executive assistant to Mr. Olin, was named general manager of the Forest Products Division at Shreveport, La., as part of the southern operations under John W. Hanes, vice-president, who also was set up over the Ecusta Paper Div., cigarette paper making, and Olin Cellophane, Div., both at Pisgah Forest, N. C. Mr. Evans joined Olin in 1950 after an association with Riegel Paper Corp. in an executive capacity. He had served as Pulp Allocation chief, WPB during the World War II, and previously had been in the investment department of Fiduciary Trust Co. of New York.

Re-alignment of Texas-Louisiana-Arkansas operational set-up has been effected during the past year. F. H. Wilson, manager of the Frost subsidiary Union Sawmill Co., Huttig, Ark., was elevated to production manager, and subsequently retired with W. H. Brown taking his place. Mr. Brown had served as secretary-treasurer of Frost Lumber Industries. When Mr. Wilson became production manager, he was succeeded at the Huttig, Ark., mill by H. Y. Hinson, who had served at the Waskom, Texas, mill which was in the "cutting out" stage. Another change has been retirement of John L. Avery, general sales manager of Frost since 1930. He was succeeded by H. W. Maddox, assistant sales manager. Frost Hardwood Floors, Inc., a subsidiary, was absorbed into the division, with Jack Fowler continuing as manager.

Acreage in Three States

James D. Rhodes, formerly maintenance superintendent of the Riegel-Carolina Corp., pulp mill at Acme, N. C., was named division engineer for the Olin's Forest Products Div., with headquarters at Shreveport, La. His responsibility includes engineering and maintenance of sawmills and related operations.

The newly acquired Olin forest acreage in three states will be administered according to latest modern management practices. Travis McClendon is forest manager for the division. At the Huttig, Ark., mill, E. A. Freeman is head forester, W. E. Moore logging superintendent, and Louis White assistant logging superintendent. The Huttig forest acreage includes 151,506 acres certified as "Tree Farm." R. W. Law is head forester for the Nacogdoches, Texas, and Mansfield, La., forest land. H. C. Alford is logging superintendent at Nacogdoches; J. B. Richardson, logging superintendent at Mansfield. R. R. Phillips is pole superintendent at the Division's treating plant in Shreveport, La. The Nacogdoches forest stand has been placed at around 75,000 acres. The Mansfield forest includes 52,124 acres certified as "Tree Farm."

The company holds a certificate for $17,439,000 covering a mill to produce nitrating pulp for the U. S. Government and for cellophane, presumably for utilization by Olin.

Foresters familiar with the terrain and needs of a mill have cited several locations in the quadrangle of Monroe, Bastrop, Farmerville and Huttig as possible locations.

Southern Pulp Industry Aids Small Timber Owners

The care given by forest land owners to their own acres is but part of the activity carried on by the Southern pulp industry for perpetuation of raw material supply. The Southern Pulpwood Conservation Association, an organization embracing 37 cooperating pulp and paper mills representing 82 percent of all pulpwood produced in the South (1951 basis) has been carrying on an extensive educational campaign for small woodland owners.

The type of work done by the Association is best illustrated by referring to its 1952 accomplishments. In that year, in addition to other activities, industrial foresters of cooperating mills examined 1,169,000 acres of woodlands held by 4,000 owners for whom they recommended management programs. Tree marking service was provided on 282,000 acres for 5,300, the result being production of 782,000 cords of pulpwood with the woodlands being left in good productive condition. In 1952 the member mills planted 52.5 million seedlings on their own lands and contributed 21.5 million seedlings to small land owners for planting.

In 1952, of 9½ million cords of pulpwood produced from non-company lands and bought by Association consuming mills, 7 percent came from salvage, 41 percent from partial cutting. This latter classification included thinning of overstocked stands, sanitary or improvement cutting, etc. It does not include the type of cutting that leaves the land with just enough trees for seed for natural re-stocking. Pulpwood obtained from seed tree type cutting accounted for 24 percent of the total shown.

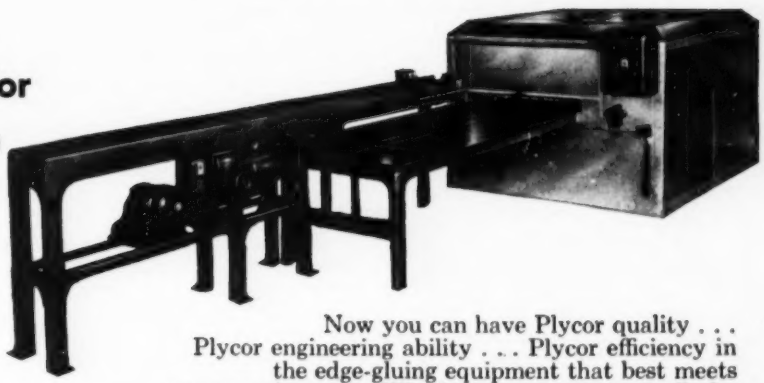
Geographical location is a factor in the price received by land owners for pulpwood stumpage inasmuch as the paper mill companies figure on a f.o.b. mill cost. Pulpwood in 1939 sold for around $3.00; in 1948, $11.75 f.o.b. cars. In current time, prices have run up around $14.00 per cord.

Named Rhodes Scholar

First Canadian forestry student to be awarded a Rhodes scholarship is Jim McWilliams, fourth year student at University of British Columbia, son of Harold G. McWilliams, forester in charge of reforestation for the provincial forest service.

Now... PLYCOR gives you BOTH STEAM and HIGH-FREQUENCY EDGE-GLUING

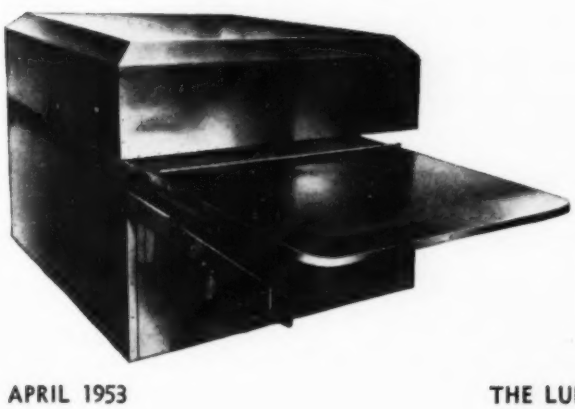
3 machines . . . precision engineered for high hourly production . . . top quality . . . low operating costs.



Now you can have Plycor quality . . . Plycor engineering ability . . . Plycor efficiency in the edge-gluing equipment that best meets your requirements. Whether your operation calls for steam heated platens or high frequency heating . . . Plycor has the answer . . . proved in outstandingly successful installations in hundreds of woodworking plants all over the country.

The ROTO-GLUER

This high frequency edge-gluer requires but one operator. One man does the entire job . . . handles the glue spreading . . . lays up the stock . . . removes finished work . . . stacks it on a truck. This one operator will turn out from 3,000 to 6,000 square feet of panels, lumber cores, table tops, sash and door stock, etc., per day. Panels are uniformly flat with a perfect bond and imperceptible glue lines. The Roto-Gluer will also do edge-banding and panel-to-frame gluing. It is equipped with conveyorized glue spreader and Westinghouse 5 K.W. or 10 K.W. high frequency generator with fingertip control.



The ELECTROGLUER

Here's the accepted leader in high frequency edge-gluing . . . the ideal unit for plants requiring 5,000 to 10,000 sq. ft. per day. Operation is fast, continuous and dependable insuring uniformly flat panels and perfectly glued joints. High hourly production is easily double that of clamp carriers with a remarkable saving in glue cost. It is equipped with conveyorized glue spreader, Westinghouse 10 K.W. generator and automatic fingertip control.

The STEAMGLUER

In appearance, this unit looks just like the Electrogluer. However, instead of the high frequency heated platens, this machine has platens heated by high pressure steam. Experience has shown the Steamgluer to be ideal for edge-gluing heavy sawed veneers of thin lumber. While its capacity is somewhat less than that of the Electrogluer, it is more economical and is easily operated by two men.

★ ★ ★ ★

If you want highest efficiency . . . maximum hourly production of top quality work . . . at lowest operating cost . . . get the facts about Plycor equipment. We'll be glad to have a representative call and give you full details. Meanwhile, write for literature.

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SMALL PLANT WELL EQUIPPED

Late in the fall of 1951 the Harris Bros., Lumber Co. sawmill, at Idaho City, Ida., was destroyed by fire. Subsequently this organization purchased a sawmill at Boise where lumber manufacturing operations are currently carried on.

It was early in 1952 the proprietor brothers—Dallas Harris, logging manager and Ivan Harris, plant manager — bought Producers Lumber Co.'s mill and timber. Since making this acquisition the plant has been modernized with installation of a new 7-ft. Monarch Forge & Machine Works band headrig and a P. T. Hobbs bandsaw grinder. The entire sawmill cut of 30 to 35M feet per day goes through the plant's 6 x 15 in. S. A. Woods matcher for finishing. Pine lumber is air-dryed before going to the planing mill, but fir lumber is green finished.

Processing equipment in sawmill includes a 6 x 48 in. edger built by Yonkee Machine Works and a 2-saw trimmer.

A 54-in. North End Machine Works tilt band resaw, equipped with air-set line bar for ripping and resawing, sets adjacent to the sawmill proper for remanufacturing.

The Harris firm carries on its own logging activities, these operations located in Mores creek drainage area in back of Idaho City, a truck haul of 70 miles.

These logs are all loaded on truck-trailers in the woods with a 25-ton Thew-Lorain Moto-Log loader model MC-504. A. G. M. diesel engine ("87 continuous horsepower"?) powers loading end of this rubber-tired unit and a GKB Waukesha gas engine powers the carrier. The loader has 35 ft. gooseneck boom manufactured by Idaho Sprocket & Machine Works (Boise). The Thew-Lorain is also used for skidding.

The company has four of its own trucks—three Whites and one K-11 International with Page & Page and Peerless trailers, and four contract trucks on this extensive haul from woods to mill.

Log skidding is carried on by tractors, a D-8 "Caterpillar" and an HD-10 Allis-Chalmers. A second D-8 "Cat" works in conjunction with a model D Allis-Chalmers motor grader in building roads.

Harris Bros. Lumber Co. markets its lumber by retail sales at the plant and through a salesman kept in the field.

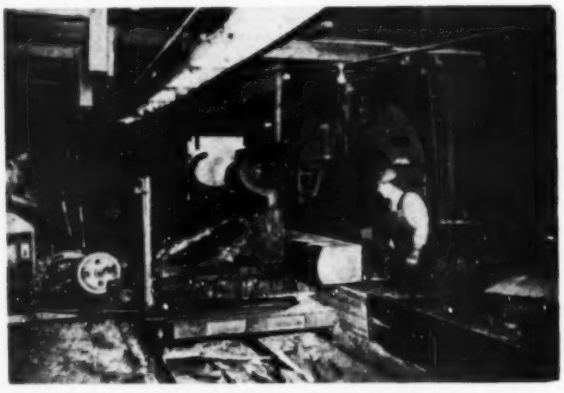
Evans' Roseburg Plant Starts Operating

The first carload of plywood produced at the Evans Products Company's newly-acquired plant at Roseburg, Ore., was shipped in mid-February. The plant, purchased from the Mar-Linn Timber Corporation, Eugene, Ore., has an annual capacity of about 48,000,000 feet of exterior and interior plywood surfaces.

Gene Mobley is resident manager of the new plant which employs 150 persons. H. B. Garrison, vice president of the company's West Coast Division, Coos Bay, Ore., is in charge of the new plant's operations.

With the addition of the Roseburg plant's productive output, the company's plywood capacity will be increased to nearly 100,000,000 feet annually. The Evans Products Company of Plymouth, Mich., also operates plywood and lumber plants at Coos Bay, Ore., and Vancouver, B.C.

Model MC-504 Thew-Lorain 25-ton Moto-Log loader, the crane powered by G.M. diesel, the carrier by GKB Waukesha gas engine.



New 7-ft. Monarch Forge 7-ft. band headrig installed last spring at Harris Bros. Lumber Co.'s sawmill, Idaho City, Idaho.

WHITE FOR LIST OF USERS

REFUSE BURNERS

THREE TO SIX DAY ERECTION

HEAD PULLEYS - BEARINGS
CHAIN - FLIGHTS
FULL CONVEYOR DRIVES
FORK LIFT DUMP BOXES

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C & D WELDING SERVICE

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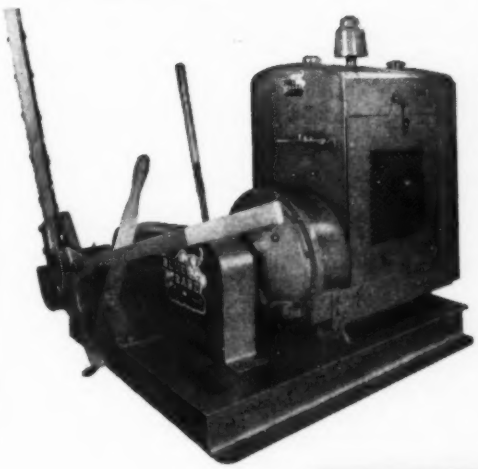
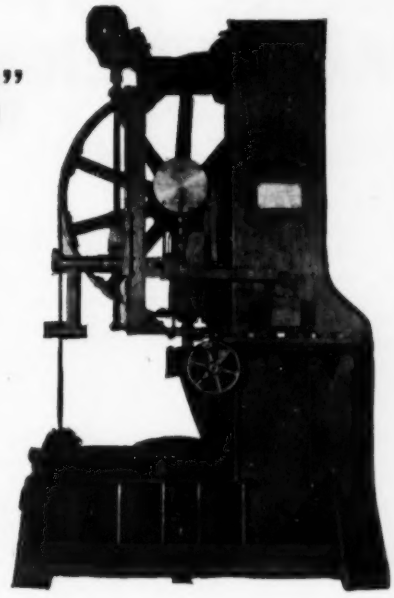
NORTHWEST MARINE IRON WORKS

"BLUE BABE"



LOG TURNERS
★
RESAWS
★
LINE BAR RESAWS



Write for Details

NORTHWEST MARINE IRON WORKS
DESIGNERS OF SAWMILL AND LOGGING EQUIPMENT
Industrial Division

BLUE BABE
BAND MILLS
54 to 72 Inch

B. C. Foresters Team-up

Three British Columbians who worked together years ago in the provincial forest service and later followed diverse courses in the industry have teamed up again—R. J. Stuart T. H. Wilkinson and R. C. St. Clair. They are opening a timber consulting service in Vancouver. Stuart was formerly manager of the B. C. Loggers Association and then formed his own Stewart Research organization which for years directed the forest industry's labor negotiations. He retired from this operation a couple of years ago. Wilkinson was for many years secretary-manager of the B. C. Lumber Manufacturers Association, then retired to operate a dude ranch in the Cariboo country. St. Clair, who continued in the forest service until retirement a year or so ago, was afterwards consulting forester for Alaska Pine & Cellulose.

E. A. Emmons, president of Union Chain & Mfg. Co., Sandusky, Ohio, accompanied by **Parnay McCune,** sales manager for this company, recently paid a flying visit to Minder Chain and Gear Co., Portland, as well as to other Pacific Coast Union Chain dealers. From the coast they proceeded on to Mexico, through to South America, and then to Cuba, visiting Union Chain dealers .

Sawmill Problems Discussed

A number of interesting papers were given at the fall meeting of the northern California section, Forest Products Research Society, when it met in Sacramento.

C. Rees, president, Rees Blow Pipe Mfg. Co., San Francisco, gave an illustrated talk on "The Handling of Wood Waste." He confined his talk to the handling of dry wood waste with a blow pipe system from woodworking machines.

Welchboard, the plastic-faced plywood manufactured by West Coast Plywood Co., Aberdeen, came in for a great deal of attention at the recent Home Show held in Seattle. Illustrated above is the Model Home that was the main feature of the show. Welchboard (3/8") was used for the home's exterior paneling and for the patio decking.

According to Jack Leik, Welchboard sales promotion representative, the patio paneling (laid over 16" on center joists which were stripped with 1 x 6's) withstood without surface wear the foot traffic of 50,000 persons who went through the home. Eight foot vertical Welchboard panels were also used along the lower levels of the model home and featured a V-groove at the vertical joint. The architect who designed the home is Donald M. Wilson; the builders, Boyd and Mahrenholz, Seattle.

MORE POWERFUL LOGGING MACHINERY GOES INTO WOODS

Some of the biggest and most powerful logging equipment the Northwest woods have ever seen is going into operation this season in British Columbia.

Northern Pulpwood Ltd., logging subsidiary of Pacific Mills, the big pulp and paper organization with mills at Ocean Falls and converting plant in Vancouver, has already taken delivery of a mammoth skidder assembled by Tyee Machinery Co., Vancouver, drawing its power from two 300 hp Cummins diesels Model NHR-BIS. The machine is equipped with Twin Disc torque converter and Curtis compressor, and may be the biggest straight skidder to be used on the west coast.

Weight of the machine is 42 tons, and it is capable of handling 2700 feet of 1⅛ inch wire, which means that in practice it can work out approximately 2200 feet of skyline.

O. D. Hallin, vice-president of Northern Pulpwood, told the LUMBERMAN that this machine will be used during the first year of its operation on land settings at the company's Beaver Cove camp, near the mouth of the Nimpkish River on northeastern Vancouver Island.

"We are gradually getting away from high-lead logging and moving into skidder operation," explained Mr. Hallin. "Like everyone else, we're trying to get cheaper logs and we believe that powerful, efficient skidders will help us by saving on road costs and reducing breakage."

After the skidder has worked on land settings it will be moved to the location for which it was primarily designed—on Bonanza Lake, about twelve miles from Beaver Cove. There the skidder will be mounted on a float and A frame logging will be carried on at various settings along the lake shore.

Ed Howard is manager of logging for Northern Pulpwood, but directly in charge at Beaver Cove is Art Rosback.

Nine Drum Unit

Another giant, a slackline machine with nine drums, is being built by Westminster Iron Works for Western Forest Industries at Gordon River, near Cowichan Lake, which produces logs for the Honeymoon Bay sawmill. This will be powered by a single 550 hp Cummins diesel engine. While there are other logging machines in the British Columbia woods of similar power, the unique feature of this unit is the versatility and flexibility provided by the unusually large number of drums. The machine has a Gearmatic Model 20 transmission and Model DS Gearmatic dual speed sprocket.

MacMillan & Bloedel also have on order a skidder similar to the Northern Pulpwood job with the exception that it will have a single 550 hp Cummins diesel for power plant, with Twin Disc torque converter. Sarita River on Alberni Canal is the destination for this interesting piece of equipment.

Apart from the trend towards big and powerful skidders, operators in British Columbia report that, especially among loggers working on salvage wood, rubber-tired arches are rapidly gaining in popularity. This development is regarded as a natural sequel to the more extensive use of rubber-tired skidders such as LeTourneau's Tournaskidder. Rubber-tired arches are virtually essential to keep pace with this unit. In Vancouver, Finning Tractor & Equipment Co. has sold several Hyster arches with rubber tires to Vancouver Island loggers, and Vancouver Equipment Corp., reports sales of Carco arches with 21 x 24 tires.

On the Alberni Canal, at a setting where the slopes are steep, Arden Logging Co. is using a Carco arch with Kay-Bruner air brakes.

"Speed is the main factor," explained a Vancouver distributor. "Loggers are evidently finding that rubber tires will give them a faster operation than track-type arches. A few years ago the track-type was popular because they just weren't making tires big enough to move up and over the rough country; the tractor would go places where tire-mounted vehicles couldn't. But today, with the development of the big tire, tractor-type units are having stiffer competition."

One Vancouver supply house has converted several arches to tires, using U. S. war surplus bomber stock.

So far, most of the conversion to rubber has been for arches working with the smaller-type machines such as the D-4 and D-6 in the case of Caterpillars. These machines are being used mostly for yarding salvage logs for the pulp mills.

New Veneer Plant In Idaho

Formation of the Idaho Veneer Company has been announced by John F. Gregor, Olympia, Washington. A complete veneer slicing plant is in the process of erection at Post Falls, Idaho, and production is expected to begin sometime in May of this year.

The plans call for production of "knotty" wood face veneers of different species, but specialize in knotty Idaho white pine for resale to manufacturers of plywood in the Northwest as well as to eastern producers.

A new precision type 112" Slicer, with hydraulic dogging, will be installed. A new single-line face Veneer Dryer, with a rated capacity of two million feet 1/16" per month, will be installed to handle the drying of veneer to its proper moisture content prior to shipping.

To round out the completeness of the operation, a small saw mill is being set up to develop cants at the plant site. Such logs as may not produce satisfactory cants suitable for the production into veneer, will be cut into lumber and sold through the normal channels.

John F. Gregor has been associated with the plywood business since 1927, and with The Davis Plywood Corporation of Cleveland, Ohio, for the past 20 years. He came to the Northwest in 1942, and was in charge of the Davis Plywood office in Olympia, Washington, up to the time of starting the Idaho Veneer Company. Robert B. Miller succeeds him in that position with Davis Plywood. The new venture is a partnership, and Mr. Gregor will be assisted by his partners Leonard A. Malloy and Robert W. Malloy (his sons-in-law) in the management of the business.

Crown-St. Helens Merger

Merging of St. Helens Pulp & Paper Co., St. Helens, Ore., into Crown Zellerbach Corp., has been approved by directors of both organizations. Conclusions of the transaction, not expected before May, depends on acquisition of 80 per cent of St. Helens stock on the agreed terms—exchange of one share (prior to 2 for 1 split) of authorized but unissued CZ common stock for 2 1/3 shares of outstanding St. Helens stock—and other qualifications.

Why specify "WARMED-OVER" AXLES designed prior to World War II?

TDA builds the only "family" of advanced-related design front and rear axles and six-wheel units in a complete range of capacities for motor trucks and buses. Also trailer axles and brakes.

THE TIMKEN-DETROIT AXLE COMPANY • Detroit 32, Michigan

WORLD'S LARGEST MANUFACTURER OF AXLES FOR TRUCKS, BUSES AND TRAILERS

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Hypoid Gearing

CUTS TRUCK MAINTENANCE COSTS —ADDS EXTRA MILEAGE

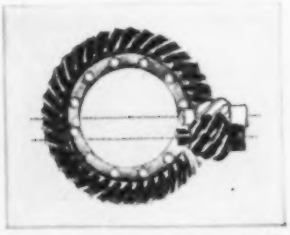
Years were spent in developing, testing and proving Hypoid for use in heavy-duty trucks

Truckers today are getting more miles per truck, under tougher operating conditions, than ever before. Such major improvements as Hypoid gearing, developed and built by TDA, are increasing truck life and reducing maintenance in spite of the heavy schedules of a defense economy.

Used on many makes of automobiles for more than a decade, Hypoid gearing is strictly a postwar development in medium- and heavy-duty truck axles. TDA, realizing its inherent advantages, spent years developing and testing before the first Hypoid-geared truck axles were placed in mass production. Today, only TDA offers Hypoid gearing in all three types of final drives—single-reduction, double-reduction and two-speed double-reduction—in a complete range of capacities.

Although a relatively new development, Hypoid truck axle gearing has been fully tried and proved. Billions of ton-miles have been rolled up in actual on-the-job operation since it was first introduced to truckers by TDA a few years ago. Find out why you should insist on rugged, dependable Hypoid gearing in the next medium- and heavy-duty trucks you buy. Write to TDA for an informative, illustrated booklet on Hypoid gearing.

A COMPLETE "INDOOR PROVING GROUND" makes it possible for TDA engineers to test heavy-duty truck axles under the same conditions as those that are actually encountered on the toughest stretches of America's highways. Truck axle torques and speeds can be reproduced, and repeated accurately, time after time. Advanced engineering facilities like this enable TDA to design and build the finest truck and bus axles in the world.



HYPOID PINION IS OFFSET FROM THE CENTERLINE OF THE GEAR. As a result the pinion is bigger and stronger. Bearings are bigger. More teeth are in contact, reducing loading per unit of contact area. Torque transmitting capacity is increased. Slower gear ratios are practical without loss of strength.

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Long Log Skyline to Span Fraser River

Western Plywood (Cariboo) Ltd., which operates a plywood plant at Quesnel in British Columbia's Cariboo district as well as at Vancouver, plans to rig a skyline across the Fraser River at Quesnel with which to transport logs from the western shore to the plant. An 1800 foot span of steel cable will be required for this somewhat unusual installation, which will probably not be completed until June. Use of the cable will eliminate the necessity of trucking across the Fraser River bridge at that point. Construction of a sawmill to operate in conjunction with the plywood factory will be started this spring.

Plywood Company Stock Offered to Employees

Fred L. Johnson, president of the Columbia Veneer Co., Kalama, Wash., has offered to sell the stock of the company to the employees making it a co-operative. The deal Mr. Johnson estimated would involve about $1,500,000, which he said could be paid for in installments. An employee committee was named to study the proposal.

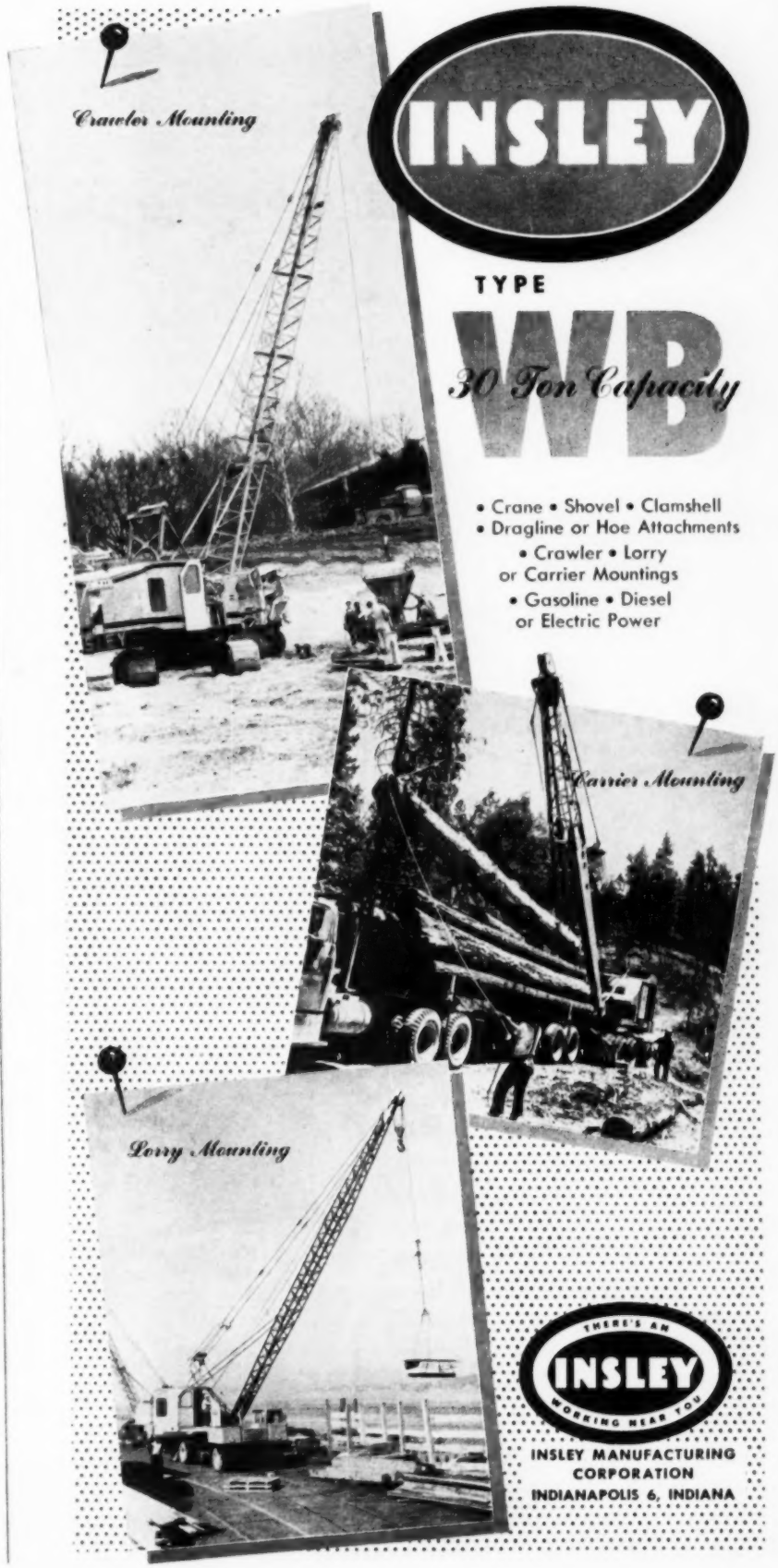
Canadian Western's Profits Decline

Net profits of Canadian Western Lumber Co., one of British Columbia's major lumber and plywood producers, was $2,879,011 during the past year, 37 percent less than in the previous year, according to the annual report issued by President Henry J. Mackin. Net profit in 1951 was $4,604,119. Mr. Mackin attributes the decline to reduced production owing to labor strike, rising costs of operation and market slump. Price improvement has been noticed since last December, he remarked.

SAE National President To Speak in Portland

Robert Cass, Cleveland, Ohio, National President for 1953, Society of Automotive Engineers, will honor the Oregon section at a dinner meeting at the Benson Hotel, Portland, on May 13. His message to the Society and its guests will be "Engineering Frontiers."

Local officers of Oregon section are C. A. Dillinger, chairman; Clarence Bear, vice chairman; Howard Richards, secretary; D. T. Saunders, technical chairman; Ray Preston, meetings chairman.



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What a Small Mill Means to a Community

The Ellensburg Lumber Co., which started operating at Ellensburg, Wash., in 1903 had it "biggest" year in 1952 as far as production was concerned. Operating 42 weeks on a one shift basis, it produced 10,000,000 feet of lumber.

Some idea of what a so called "small mill" contributes to a community, can be gained from figures released by company officials. The company during the past season paid out $311,000 in wages. $243,000 was paid out for logs and $50,000 was spent for supplies and services. Prior to starting the 1951-1952 season, the company spent $45,000 on an improvement program. Incidentally it planned to spend about $40,000 in preparation of the 1952-1953 season.

During the peak of the season the company employed about 85 persons.

The largest single day's production was 63,000 feet. The average production for the season was 49,000 feet.

O. W. Sinclair, son of the founder William Sinclair, is chairman of the Board. E. W. Parrish is manager and Wilfred F. Baker, resident manager. The Cascade Lumber Co., Yakima, Wash., is a major stockholder and supplies most of the logs cut in the mill.

Pioneer B.C. Lumberman Dies

Alexander Sereth, 79, managing director of Sereth Lumber Co., managing director of Sereth Lumber Co., which operated Eureka Sawmills at Nanaimo, B. C. dies at his home in Vancouver soon after returning from a vacation in Hawaii. Born in Poland, Mr. Sereth had been active in the lumber business for 45 years and at the peak of his career, in the early 1920's, he was regarded as Canada's biggest lumber wholesaler, handling up to 50,000,000 board feet monthly. He operated as many as 40 lumber yards, mostly in Alberta, before World War I, but he suffered financial reverses and lost most of his property as a result of a federal moratorium on debts. In 1918 he bought 18,000,000 feet of airplane spruce timber in the Skeena district, shipped Davis rafts from there to Vancouver, and manufactured lumber there for Ford Motor Co. He rebuilt his business, specializing in Florida sales and subsequently built mills on Vancouver Island. His son Arthur has been actively engaged in the business for 30 years.

Loggers Radio Aided Civilian Defense Work

During the recent floods in Humboldt County, Calif., lumber companies put their two way radio facilities at the disposal of the Civilian Defense organization. By this means the Civilian Defense workers were able to keep in touch with isolated areas and take care of calls for aid.

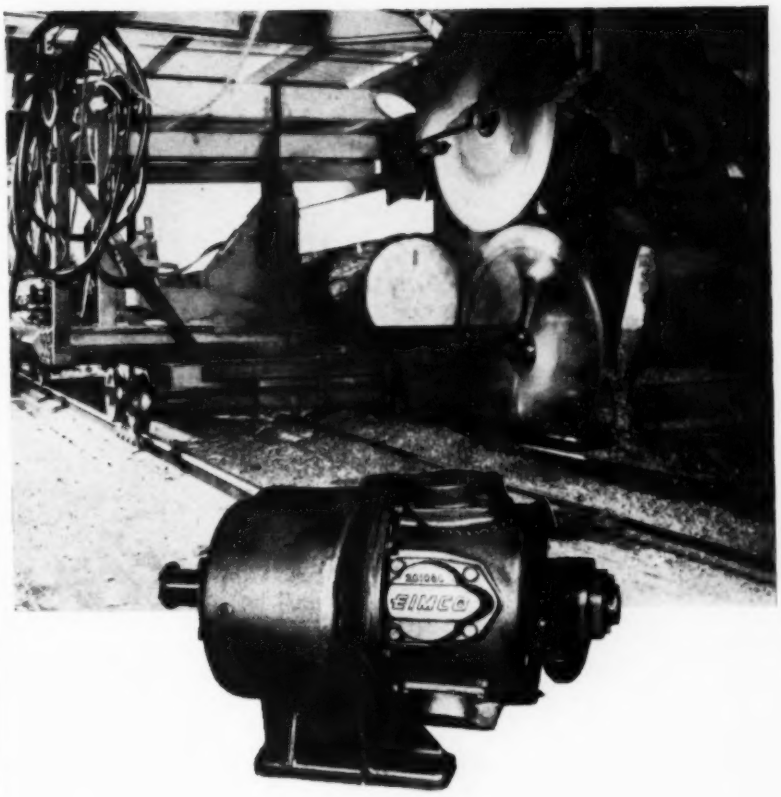
Hammond Lumber Co., for instance, had a mobile radio unit dispatched to the town of Orick where messages were relayed to Hammond Big Lagoon office radio set-up, then relayed to Civilian Defense headquarters in Eureka. For example: the call came from a mobile unit that heavy duty equipment was needed immediately to attempt to save the bridge in Orick. No time was lost—Big Lagoon was able, through their radio setup, to make arrangements with their men in the woods to secure equipment and man power and set out for Orick—this was all accomplished within minutes, by going through the radio channels.

Hammond, itself, was able to ascertain its own losses and damages, without delay, from its Cummings Creek and Big Lagoon operations and start immediately on laying out plans for repairs as soon as it was feasible to do so. Having a radio station at Samoa made it possible to coordinate all radio communications within the Hammond operations by relaying messages to the north and south where distance does not allow direct communications.

Beetles Attack in Lake County, Oregon

Lost Forest, an unusual pine forest isolated in desert area of Northeastern Lake county of Oregon, has been attacked rather extensively by beetles and preliminary work is now carried on for salvage harvest operations on this tract. Kenneth A. Burkholder, district forester at Bend for U. S. Bureau of Land Management, expects it will be necessary to log at least a million feet of the timber in checking the invasion. He said crews are already in the area marking trees for cutting, the harvesting to start later this year after bids have been called.

Of recent decades dunes from dry lake beds have drifted into edge of the forest, resulting in lowering vitality of the trees. Consequently beetles attacked the low-vitality trees and are now spreading to other parts of the forest.



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They're powerful, reversible and extremely heavy-duty. They'll give you absolute dependabiltiy in their operating function.

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NOTE—Eimco motors can be used with steam instead of air—write for information.

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Researchers Will Meet

"Log Barking for Increased Forest Utilization" will be the theme of the spring meeting of the Forest Products Research Society, Northern California Section. The session is scheduled for the Palace Hotel, San Francisco, Wednesday, May 6.

Harry E. Austin, vice-president in charge of Pacific Coast activities for the Radio Corporation of America, as principal speaker, will discuss modern communications.

Various papers will be presented on "Mechanical Log Barking," "Hydraulic Log Barking," "Chemical Utilization of Bark,' and "Log Barking for Greater Profit."

Indiana Hardwood Annual

The Indiana Hardwood Lumbermen's Association held its Fifty-Fifth annual meeting, elected the following officers: President, J. Bruce Urbahns of the Reynolds Manufacturing Company. Rushville, Indiana; First Vice President, Donald S. Mattson of the John I. Shafer Hardwood Company, Logansport, Indiana; Second Vice President, R. E. Hollowell, Jr., of the Pierson-Hollowell Company, Inc., Indianapolis, Indiana; Secretary-Treasurer, R. C. Brundage of the Department of Forestry and Conservation, Purdue University, Lafayette, Indiana.

Robert Tucker, Professor of Business Economics, Indiana University predicted that wholesale prices of commodities will decline about 5 per cent this next year.

Stanley J. Raush, President of the Atkins Saw Division of Borg-Warner Corporation stressed and enumerated recent developments of his company's research department as follows: 1. A coating that will prevent rusting of saws in storage. 2. A new chain saw that stays sharp longer yet saws at greater speed. 3. A circular headsaw that has stabilizing holes that air condition it. This saw increases lumber production and reduces maintenance cost. Messrs. Owen and Rohr, also of the Borg-Warner Corporation, spoke briefly about the development and use of the new circular headsaw that was on display at the meeting.

Prominent Lumberman Killed in Auto Accident

The host of friends of Frank N. Blagen, 62, prominent figure in the lumber industry were shocked to learn of his death in an auto accident near Santa Cruz, Calif., last month.

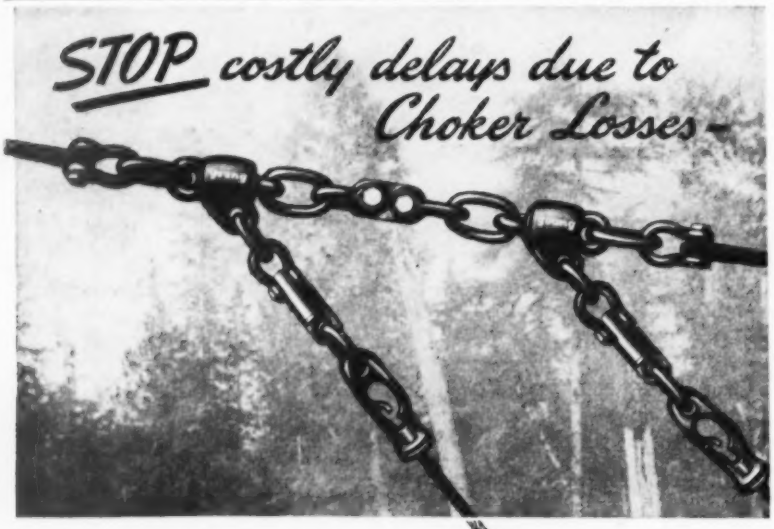
Blagen was born in Portland, Ore., of a pioneer lumber family. He early became associated with the Grays Harbor Lumber Co., Hoquiam, Wash., now the Blagen Mill Co.

In 1923 this company purchased the Davies-Johnson Lumber Co. with a mill and timber at Calpine in Sierra county, Calif. Blagen operated this company until 1939 when the Blagen interests purchased a tract of timber in Calaveras county at White Pines and built the Blagen Lumber Co. Blagen was in charge of this operation from 1939 until 1940 when a controlling interest was sold to the American Forest Products Corp. who now operate it.

Since that time Blagen has lived in semi-retirement at Santa Cruz. He leaves his wife, Helen, and three children; Howard Blagen, manager, Associated Lumber & Box Co., Wilseyville, Calif.; Mrs. Marilyn McIntosh, wife of E. H. McIntosh, manager, Blagen Mill Co., Hoquiam; and Frank N. Blagen Jr., assistant manager, Pickering Lumber Corp., Standard, Calif.

Two Oregon Mills Added

Stiller Brothers of Yamhill, Ore., are rebuilding their sawmill which was recently destroyed by fire. The new mill will be same capacity but a different design. At Svensen, the new Bear Creek shingle mill is being completed. Wickiup Logging company will furnish the cedar logs.



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Made of high-grade, long wearing manganese steel, these hooks assure long hard trouble-free service.

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COSTS ARE LOWER, efficiency is up and safety is increased when you rig for yarding and loading with Edwards Preformed Sterling Steel Wire Rope.

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Moore Drying Facilities have proven a paying investment in large and small mills alike, seasoning all species of lumber and veneer.

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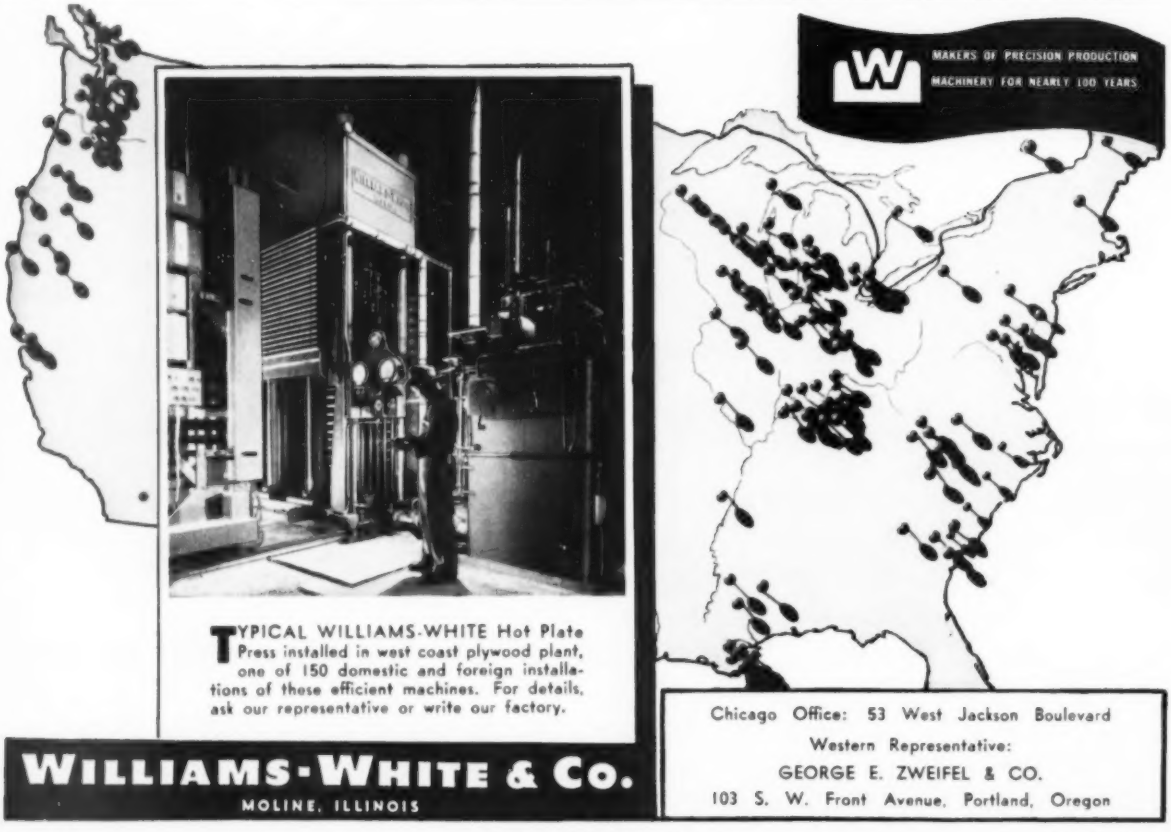

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Canadians Working Against Time In Logging Vast Area To Be Flooded

Up in the Nechako country of Northwestern British Columbia, an interesting log salvage program is under way with a view to harvesting as much timber as possible from an area that will soon be flooded by waterpower development.

Aluminum Co. of Canada is building a smelter at Kitimat on the coast, south of Prince Rupert, and a part of the project, which will ultimately cost $550 million, a big hydro-electric development, is proceeding for the nearby power site at Kemano.

To create the required power (eventually 1.6 million HP) the Nechako lake and river system is being drastically altered so that water that has been flowing eastward to the Fraser for countless centuries will be diverted westward, through a ten-mile tunnel penetrating a mountain range and terminating at the penstocks of Kemano.

River To Disappear

Diversion of this water will result in the virtual disappearance of the Nechako river, and the elevation of Ootsa and other lakes in the Nechako headwaters will rise to form one big storage reservoir.

Pacific Western Lumber Co., a progressive Vancouver organization launched since World War II, headed by Stewart M. Walker as president, has undertaken to salvage some 30 million feet of timber, mostly spruce and jack pine, before the flood.

The British Columbia government has been trying to encourage loggers to enter that area and get as much of the good timber out, and stumpage and royalties have already been reduced to the legal minimum of 60 cents per thousand for spruce, the predominant species. The government had previously reduced the combined stumpage and royalty rate to $1.75, roughly one third of the going rate for timber in that area.

80 MM Ft. Sawlogs Available

Although no cruise has been made of the area to be flooded, the provincial forest service has estimated that there are 130,000 acres which contain 80,000,000 feet of saw log timber. No estimate has been made of the amount of pulpwood available there.

Pacific Western Lumber Co. is represented at the town of Burns Lake, in the Nechako country, by Bill Gilgan, who has evolved the quick salvage method of putting small, highly mobile logging crews along the south shore of Ootsa Lake and cold-decking tree-lengths on the ice of the lake during the winter months. International tractors are used on this job.

These logs are then boomed in tree lengths during the spring breakup and summer months and towed in bag booms along the lake to the company's sawmilling area on the north shore of the lake. There, four sawmills are steadily engaged all summer cutting up logs accumulated during the winter and those felled and boomed in the lake during the summer.

Many Internationals Used

Further to the west, Morrison-Knudsen and other contractors for various parts of the Aluminum Co. of Canada project, are using a fleet of more than 40 International TD 24's, but mostly on road clearing and other general excavation rather than in logging.

Racing a flood is not a unique experience for logging companies in British Columbia. Several years ago, Silver Skagit Logging Co. had a somewhat similar problem to contend with near Hope, on the lower reaches of the Fraser River about 95 miles east of Vancouver. A section of the Skagit valley was to be flooded preliminary to completion of the Ross Dam in Washington, and it was found that the most feasible way of logging the country to be flooded would be to truck the logs northward across the border and dump them in the Fraser, where they were boomed and later towed to Alaska Pine Co.'s mill at New Westminster, the Walton Lumber Co. at Everett and elsewhere. Felix Schlickheisen was logging superintendent.

THIS TD 24 INTERNATIONAL TRACTOR is one of many being used in the Nechako-Kemano country of Northwestern British Columbia not only to clear road and building sites but to yard tree length logs along the shore of Ootsa Lake where the area now in forest will eventually be flooded by power dams.

Operation Considered Unique

The Pacific Western Lumber Co's project in the Nechako valley, however, is regarded as unique in logging history. Apart from the utilization of the frozen lake surface, the company is pioneering new ground by having its small working parties cutting timber to the lake's edge and moving to higher ground as the water rises.

Gilgan is assisted by Jack Gillespie at Burns Lake, where the organization also buys carload lots of lumber along the Canadian National line from Terrace to McBride and Dawson Creek.

Although Pacific Western has its head office in Vancouver, it maintains three buying offices covering the whole of British Columbia as well as sales offices in Ontario.

Woman on Staff

The company is one of the largest wholesalers of western white spruce in British Columbia in addition to handling rail and cargo shipments of Douglas fir and other coast species from Vancouver. At Quesnel it operates a planing mill, which produces high quality interior Douglas fir dimension and western white spruce. This operation is managed by Andrew Laidlaw, for many years in the industry in B.C.

This is one of the few organizations in the province that is primarily a wholesale lumber firm yet operates its own logging camps and mills. Another unusual feature of the operation is that its head office staff includes one of the few women "traders" in the lumber business, Miss Anne Yorke.

Humboldt Plywood Plant Expansion

Humboldt Plywood Corp., Arcata, Calif., plans to add a 300x75 foot storage and warehouse unit and a 80x18 drier unit. The new drier unit will handle veneer produced in the company's Maple Creek veneer plant.

With these new buildings and with a new loading and unloading dock the company expects to be able to operate more efficiently. Announcement of these improvements were made recently by A. L. Lung, vice-president and manager.

W. C. Peterson has been named office manager and Ward Lung, production manager of the Maple Creek mill. Peterson replaces William Davis while Lung replaces William Sparber. Davis and Sparber have purchased the Trinity Valley Lumber Co.

STANDARD COST ACCOUNTING

Development of a standard cost accounting form applicable to all sizes of sawmill operations has been effected by Texas Forest Service in cooperation with a committee from Texas Lumber Manufacturers Ass'n. Copies of report and forms (Technical Report No. 5) may be obtained from Forest Products Dept., Box 460, Lufkin, Texas. Those contributing to the study included: George Smith, Southern Pine Lumber Co., Diboll; J. L. Moffett, Kirby Lumber Corp., Houston; Miss Emma Edens, Edens-Birch Lumber Co., Corrigan; Professors Tom Leland and Fred Farrar, Business Administration Dept., Texas A. & M. College; and, E. D. Marshall, now a Lufkin (Texas) consultant but at the time head of Forest Products Department.

Origination of the standards study rose from the inability of lumber manufacturers to gauge the efficiency of their operations because of lack of costs based upon standard procedure. The cost forms not only allocate phases of operation to their proper category but calls for conversion to uniform basis of log scaling.

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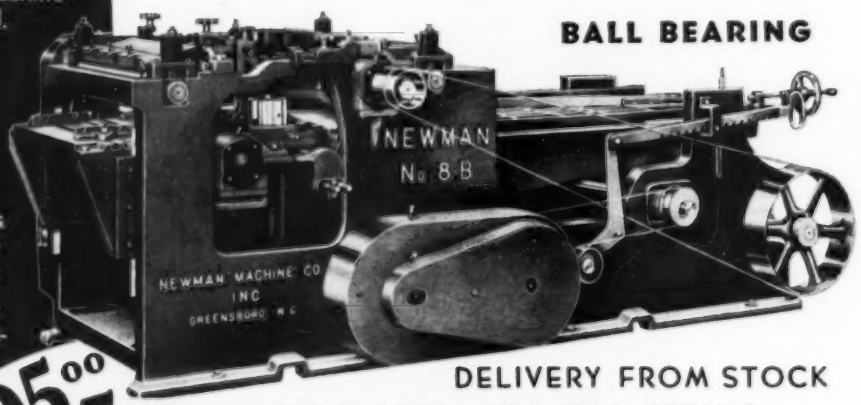

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Western Pine Meeting

(Continued from Page 59)

factorily worked out in a method easily adapted to commercial production units.

H. F. Root, lumber division, Anaconda Copper Mining Co., and chairman of the statistical committee of the association, said that there had been a shift in the lumber picture in the past 20 years—less ponderosa pine is going for box shook, and there is more selective logging going on.

Ray Berry, Scott Lumber Co., chairman of the traffic committee, reported on the work of the committee during the year, and of recent developments in this field.

New FS Contract to Be Used

Truman Collins, Collins Pine Co., and chairman of the forest conservation committee, complimented the various state forest practices committee for their activities. He told of the work of a special committee working on timber appraisal problems. This work deals with a proposed new contract form the Forest Service will use for timber sales. Among the points the lumber industry is concerned with is limiting scaling time to 40 hours per week instead of 48 hours per week; making the timber operator responsible for all fires in the sale area whether or not he was responsible for them; the new proposed right-of-way policy; and the recommended trim allowance of 16′ logs to 6″ and 12″ for 32′ logs.

John Aram, Boise-Payette Lumber Co., and chairman of the highway truck committee told the group there was an improved understanding on the part of the public as to the problems of log hauling over highways. He said that industry has made gains in favorable public relations, and should work to keep them.

Elected new president of the Western Pine Association was U. R. Armstrong, The Hallack & Howard Lumber Co., Winchester, Idaho. First vice-president is George L. Barkhurst, Michigan River Lumber Co., Laramie, Wyoming, and second vice-president is A. B. Hood, Ralph L. Smith Lumber Co., Anderson, Calif. C. T. Gray, Stockton Box Co., Stockton, Calif., was re-elected treasurer, and S. V. Fullaway Jr. was re-elected secretary-manager.

Robert W. Evans has been appointed Assistant Director of Public Relations for United States Steel Corporation's Western District, with headquarters at 25 Beale Street, San Francisco. He has been Assistant to the Director of Public Relations for the Pittsburgh District since 1944.

Coming Meetings

Willamette Valley Logging Conference—With Machinery Show, Eugene, Oregon, April 23-25.

Olympic Logging Conference, Victoria, British Columbia, April 23-24.

Western Dry Kiln Clubs. Annual., Boise, Ida., May 15-16.

Redwood Logging Conference—Possible Machinery Show, Eureka, California, May 22-23.

Douglas Fir Plywood Association, Gearhart, Oregon, May 25-26.

Forest Products Research Society, Memphis, Tennessee, June 15-17.

Society of American Foresters, Colorado Springs, Colorado, Sept. 14-16.

Pacific Logging Congress, Seattle, Washington, Nov. 4-6.

Western Forestry & Conservation Association, Seattle, Washington, Dec. 9-11.

Walter Lee Stout, long-time resident of Grays Harbor, died recently in Centralia, Wash., at age 74. He was associated with the old Slade mill and was manager of the Coates-Fordney logging operations. At one time he had his own retail lumber sales office. He was active in civic life.

For Better Production At Lower Cost

CORLEY AIR-DOG CARRIAGE

Here is the carriage that is literally taking the country by storm . . . While it is a comparatively new Corley production, it has achieved that well-nigh impossible distinction of pleasing sawyers, blocksetters and owners . . . Sawyers say that they've never cut such good lumber . . . Blocksetters say that they've never had it so easy . . . Owners say that they're realizing new profits . . . That's a combination hard to beat!

There's a Corley Air-Dog Carriage just right for you . . . Built in four sizes with headblock openings from 37″ to 60″.

IF YOU ARE A BIG MILL OPERATOR—High production costs and the scarcity of trained saw filers are forcing many operators to abandon their band mills. Corley Equipment supplies the answer for them. Much lower cost with no sacrifice in lumber quality.

IF YOU ARE A SMALL MILL OPERATOR—Many small mill operators are finding it possible to **step up** with Corley Equipment. More lumber and better lumber at a lower cost-per-thousand are placing them in a higher income bracket.

Regardless Of Your Needs—Contact Corley

Smart Lumbermen Bank On Corley

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Pacific Lumber Co. Promotions

A number of promotions in important supervisory assignments at the big Pacific Lumber Co. plant, Scotia, Calif., were announced last month by Gordon J. Manary, manager.

J. P. "Terry" McGovern, who has been with T.P.L. Co. since 1911 is assigned to the position of advisor to management on production matters as well as counsellor to all department heads.

Don McGovern will head the newly created lumber inspection department. He started with the company in 1934.

Hollis Rollins, with T.P.L. Co. since 1927 is appointed superintendent of production in charge of Sawmills "A" and "B", green chains, remilling departments, dry kilns, pond and peeling plant.

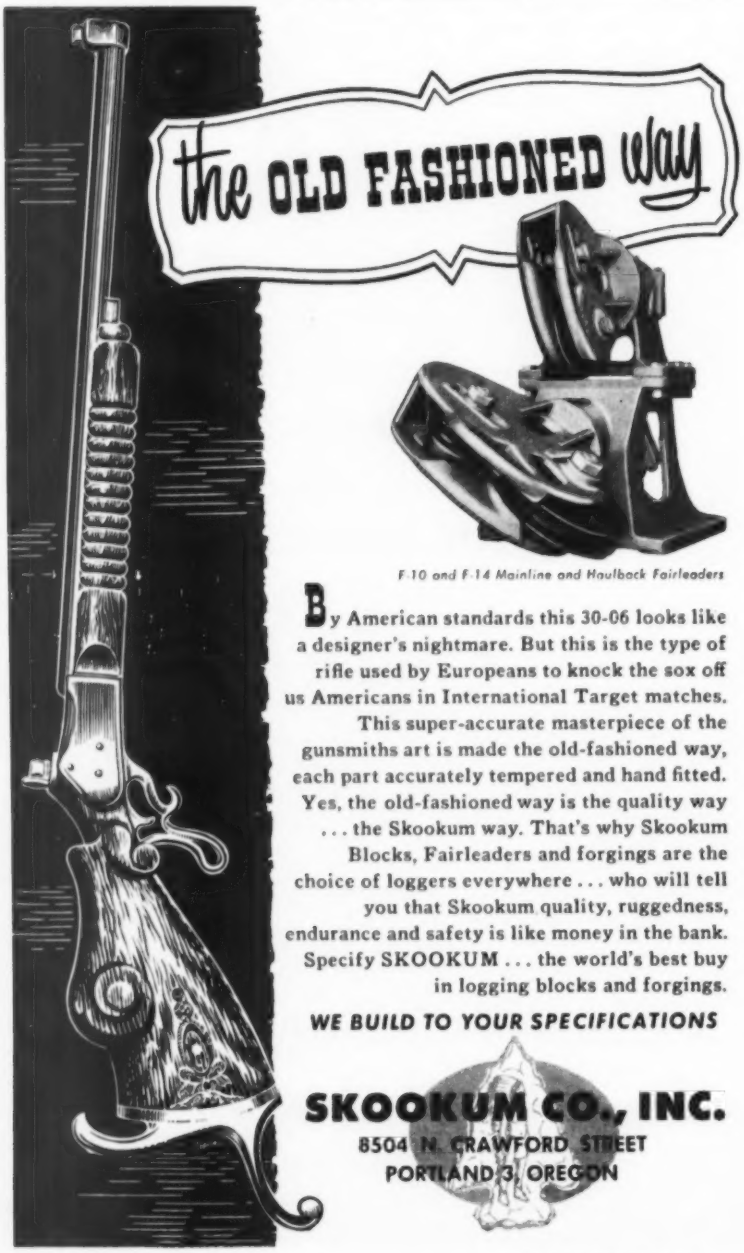
Lawrence Bryant is appointed assistant superintendent of production and will in addition to other duties which may be assigned, be in charge of "A" kiln operations. He has been 20 years with the company.

Charles Jaehnig, who started with T.P.L. Co. in 1914, and who also worked for Hobbs-Wall Co. for a number of years, is now assistant superintendent of distribution

O. R. Dye, 20 years with the company, is in complete charge of the factory and finishing departments, reporting directly to management.

Edward Carpenter, who started in 1933 has been appointed assistant to Manary with headquarters at the main office.

Walter Bassett, who has been with the company for the past 20 years, and lately was foreman of the Jordan Creek operations of the company, has been appointed superintendent over all woods operations.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By American standards this 30-06 looks like a designer's nightmare. But this is the type of rifle used by Europeans to knock the sox off us Americans in International Target matches. This super-accurate masterpiece of the gunsmiths art is made the old-fashioned way, each part accurately tempered and hand fitted. Yes, the old-fashioned way is the quality way ... the Skookum way. That's why Skookum Blocks, Fairleaders and forgings are the choice of loggers everywhere ... who will tell you that Skookum quality, ruggedness, endurance and safety is like money in the bank. Specify SKOOKUM ... the world's best buy in logging blocks and forgings.
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Research Society Officers Nominated

The National Nominating Committee of the Forest Products Research Society has announced that it has chosen the folowing slate of officers:

For President-Elect—L. J. Carr, L. J. Carr Co., Sacramento, Calif. Carr is currently Vice-President of the Society.

For Vice-President—Moss B. Christian, Chicago Mill and Lumber Co., Tallulah, La., presently South Central Regional Board Member; and E. E. Dargan, Dargan Lumber Mfg. Co., Conway, S. C., currently Southeast Regional Board Member.

Ply-Veneer Containers

(Continued from Page 56)

production-line flow of Ply-Veneer blanks.

Trade Marks Printed

Weyerhaeuser prints the customers' familiar brand names and trademarks right on the containers. The veneer is routed for folding, then sandwiched between two sheets of glued containerboard. The customer can fasten his containers either by taping, banding, stapling or nailing. The container pictured has wood end cleats for extra stability. Other uses besides for containers will be developed in the future.

A number of tests have been made to show comparison with containers made of other materials. The Ply-Veneer showed up very favorably in weight, water-resistance, dropping, diagonal compression and supportability tests.

Second Co-operative Two Way Radio

A second community co-operative radio communications system went into operation this summer in Southern Oregon forests products industry, following by two years establishment of the original such unit at Medford by Southern Oregon Conservation & Tree Farm Assn. This organization is closely allied with both of these communications systems. Establishment of the newer unit, headquartered at Grants Pass and known as Sexton Forest Industries Communications, was more difficult than the original because of the topography concerned and need for covering an even larger area than is covered by the Medford system.

According to L. L. "Doc" Simpson, secretary-manager of the Southern Oregon association, "We made three exhaustive surveys from three different mountain tops. Sexton mountain, elevation 3855 ft., about 10 miles north of Grants Pass gave us the coverage we needed and was chosen as site for the base station."

Subsequent to these tests 10 companies agreed to sponsor construction of completed station, application for construction permits were made and the base station built in 1951. Equipment was then ordered from Motorola and was received last spring and installation started. According to "Doc" Simpson, technical difficulties due to the system's "very high frequency link" were encountered but were later overcome and the system now "is working very satisfactorily".

Sixty foot aluminum tower on Sexton Mountain with triple skirt antennna and two Yagi directional antennas for control link.

The 10 original companies devised a plan where-by additional users may share in the radio system. By early summer 13 organizations were participating and operating 30 mobile units in the system. As result of interest displayed by other operators in this region, it is anticipated that at least 20 firms will be functioning in the co-op communications system before end of this year.

Main office of the system is located at residence of Wesley Hassett, he and his family continuing on 24-hour call, particularly during rush season. In that Mr. Hassett's office is in his home, a remote control such as used at the Medford unit is unnecessary.

The Sexton main station (call letter KOE 205) and Sexton mobiles (KA 9593) operate on frequency of 153.23MC. A 2-frequency duplex control functions to span between Sexton mountain station and main office, the Grants Pass office span (KOE 75) on 457.65 MC and Sexton span (KOE 75) 465.15 MC.

Sponsoring firms include the following: Robert Dollar Co., Glendale; Multnomah Plywood, Inc., Portland; Wesley & Russell Hassett, Grants Pass; Illinois Valley Logging Co., Grants Pass; J & J Logging Co., Grants Pass; Moore Timber Products, Inc., Grants Pass; S. H. & W. Lumber Co., Selma; Loyd F. Silva, Grants Pass; A. C. Smith Lumber Co., Grants Pass and Wolf Creek; Spalding & Son, Grants Pass.

Ploughed fields look like parkways to the Land Rover! Sure of foot and packed with power, it takes you where even bird-dogs fear to tread. A man-of-all-work, too – it'll tow anything from a trailer to a tree, saw and spray with its power takeoffs, handle all sorts of jobs. Seats 3 in front, more behind. Farmers! Lumbermen! Truckers! Sportsmen! See the Land Rover today at your nearest dealer.

TRY AND TIE THIS . . . 4 cyl., 50 hp Rover F-head engine . . . 4-wheel drive, front free wheeling . . . 8 speeds forward . . . Two power takeoffs.

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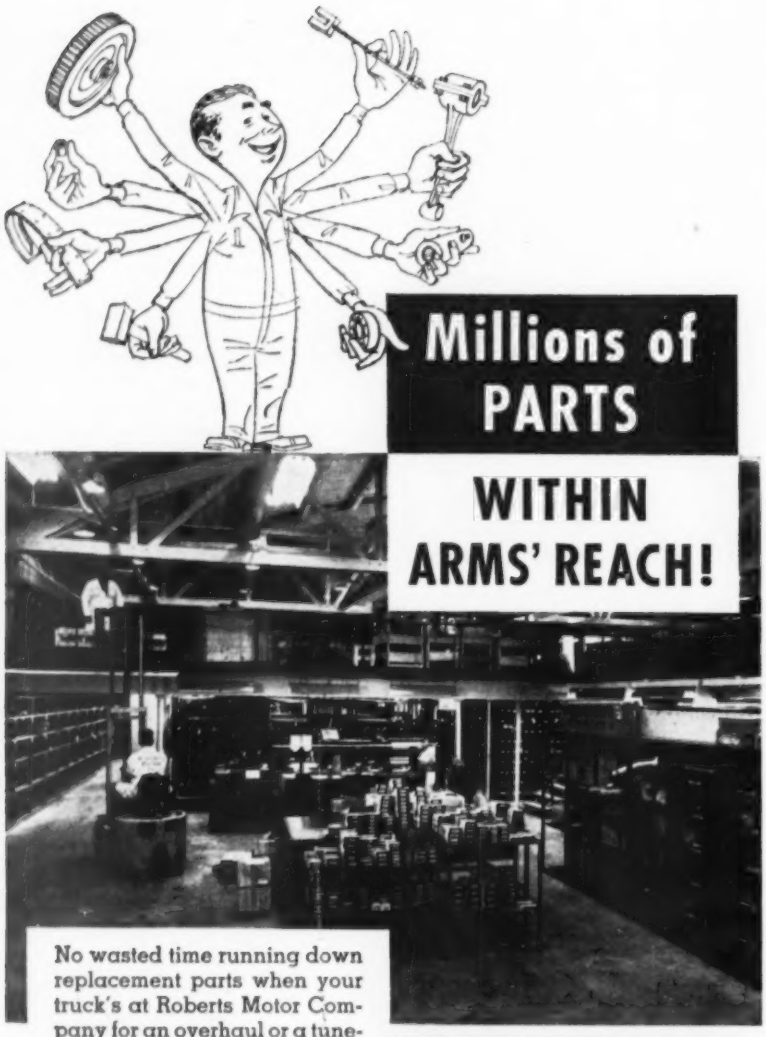

No wasted time running down replacement parts when your truck's at Roberts Motor Company for an overhaul or a tune-up. Here in our fine new building...*within arms' reach* of our experts... is the Northwest's largest stock of truck and industrial parts... genuine replacement parts to match the precision and durability of the originals. Rely on Roberts for complete truck parts service.

A TRUCK TIP

When wiring a truck, you often find it difficult to feed the wire around corners or through congested areas. To solve this problem, use a speedometer cable as a pilot, twisting it as you force it through. Next, solder the wire to the cable and pull it through.

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ROBERTS
MOTOR COMPANY
123 N. E. PACIFIC STREET • PORTLAND, OREGON

Special Report

(Continued from Page 53)

their budgets. This cut will be felt in the Forest Service, the BLM, the Indian Service and elsewhere. Certainly some of the planned activities will have to be streamlined.

While the Department of Commerce has no timber lands under its jurisdiction, it is an agency which has always been very much in the forest industry picture and especially so during war periods. At the moment the department has been stripped of just about all such activities. The National Production Authority is a mere skeleton. The department, however, hopes and is making plans to activate a Forest Industry Advisory committee which will be able to make it possible to maintain workable contacts between the various branches of the industry and many government divisions which need to keep in touch with producers of forest products.

At the moment agencies which have in the past gathered and compiled lumber production statistics and other statistical information have little money or personnel for such purposes. Whether or not they will be able to carry on such work in the future likely will depend on how liberal Congress is with funds.

PROGRESS IN ALASKA

The spotlight has been focused on Alaska, which has large, undeveloped standing timber resources, by the appointment of a forester as Governor. Frank Heintzleman, the new chief executive at Juneau, was for many years Regional Forester of Alaska and there probably is no man better acquainted with its problems and needs. Here in Washington we heard statements that the time may come when some of Alaska's timberlands should be opened to individuals, on the theory that if people go north there should be land, timber or agricultural, for them to obtain.

There is a very definite feeling in official circles that the CVA scheme of the Fair Deal (Columbia Valley Authority) won't get far during this administration, and it looks like Bonneville Power Adminstrator Paul Raver will not be kept on the Eisenhower team.

There is going to be a let-up in forcing new ideas onto the people. If people at the local level decide they

want something, they will receive sympathetic attention at Washington but no more promotion of untried theories from Washington governmental sources.

FOREIGN COMPETITION

While thire is not much support for tariffs, it is a subject constantly forced to the attention of Congressmen and senators by businesses which are feeling the ruining competition of foreign-made goods. One of the most recent cases of this kind is the flood of Japanese-made plywood panels. These panels made from Philippine woods are pouring into the country in increasing quantities and being used extensively in the door industry. The Douglas fir door industry has felt the serious impact of the Japanese made product.

Federal Communications Commission appears to have high regard for forest industries and up to the end of February had authorized some 814 systems in forest operations. The commission wants to help simplify the procedure necessary for lumbermen to install radio equipment.

FOREST SERVICE PROGRAM

Chief Forester R. E. McArdle seems to have gained the confidence of his superiors, and we gained the impression he'll be kept in office.

The Forest Service will push forward its Timber Resources Review as rapidly and vigorously as its money and manpower permits.

We gained the impression that the Forest Service would like to step up its efforts to obtain better forestry practices on farms and small ownerships. There is an impression that with the larger private owners now on the whole doing a good job of timber land management and with the states also following vigorous forestry programs, the one spot where the federal government can get greater tree-growing activities under way is on the farms and on small-tract timber ownerships. Here again, what's done likely will depend on the liberality of Congress.

And so as of late March programs of great interest and importance are taking form in the Nation's capitol. There is no question but that the new administration wants to initiate a new forestry program and place in charge of such a program men who are in complete agreement with the administration.

—The Editor

Plywood Beams

Douglas fir plywood manufactured in British Columbia is being used in construction of beams for large industrial buildings, such as a warehouse for the E. B. Eddy Co. at Hull, Que., and a similar structure for MacMillan & Bloedel at Edmonton, Alta., where nine box beams, each 150 feet long, were fabricated on the site. The box beams were built of 2x8 lumber flanges and one inch plywood webs four feet wide by 25 feet. They were nailed and glued and at intervals along the beam vertical stiffeners separated the top and bottom flange. Each beam weighs 8,000 pounds and was hoisted into place by mobile cranes. The project demonstrated the ease of field fabrication.

Dwyer Buys 24 Million Ft.

Dwyer Lumber Co., Portland, is the successful bidder on 23,200,000 feet of timber in the Mt. Hood National Forest near Oregon City and in that city's watershed. The price was $349,460.

There is extensive blow down timber in the watershed and Forest Supervisor Lloyd Olson stated it was feared bark beetle infestation would destroy its value. The timber sold is old growth, half fir and half hemlock.

BERGER YARDERS AND LOADERS

Standard of Value and Performance

Properly engineered and kept up-to-the-minute, Berger yarders and loaders have been the logging industry's standard of value and performance for more than a generation. Quality. Suitability. Dependability . . . Compact construction . . . greatest possible accessibility . . . carefully detailed lubrication . . . convenient controls . . . patented 3-point suspension, making frames that are stronger, more rigid, yet lighter in weight and insuring permanent alignment of gears and bearings . . . For increased log production, longer line life, less wear on rigging and moving parts, rely on Berger yarders and loaders.

Efficient hauling speed, instantly and automatically, with BD-198-TT, Berger 3-Drum, Torque-Converter Yarder.

NOW YOU'RE LOGGIN' WITH Berger

Loaders . . . Yarders . . . Fairleaders . . . Blocks . . Air Tongs . . . Air Valves . . . Loading Booms

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Peoria Malleable Iron Castings go into this Hyster Karry Krane — also Hyster Winches and Lift Trucks.

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Converting From Rail

Another major logging operation of MacMillan & Bloedel—the Ash River division, which serves the sawmills and pulp mill in the Port Alberni area—is to be converted from rail to truck, according to President B. M. Hoffmeister. The other three truck shows recently converted from rail are Menzies Bay, Copper Canyon and Nanaimo River. The two last-named divisions serve the Chemainus sawmill. Menzies Bay was operated by Bloedel, Stewart & Welch before the merger.

Most of the logging road systems now under construction are scheduled to be completed early this year. Cost of the new truck roads has been estimated at $700,000, and an additional $1,600,000 is being spent on new equipment.

When Ash River division is converted, logs will roll on rubber past Sproat Lake division and along the latter's road to the dump at Shoemaker Bay, across Alberni Inlet from the company's conversion mills. Ash River's present rail haul from Deep Lake is about 43 miles, and the conversion will cut off several miles of hauling distance.

The company hopes to achieve these advantages: 1. More efficient supervision through greater mobility and communication by two-way radio; 2. Better utilization and less breakage through reduction of handling; 3. Patch logging will be facilitated, thus encouraging new growth; 4. Selectivity as to grades and species will be made easier in logging; 5. Fire risk will be reduced because settings will be smaller and equipment more mobile; 6. Fewer interruptions of production, such as rail tie-ups due to derailment; 7. Less road to maintain as trucks can negotiate steeper grades and sharper curves, thus reducing length of road.

Safety Stressed in New Zealand

Importance of safety in forest operations is being recognized in New Zealand. N. Z. Forest Products Ltd., conducts a safety competition in its various operations in the Tokoroa-Taupo district. Colored pennants have been awarded the winners in the past, and as an additional distinction the successful sections each quarter will have their name inscribed on a handsome pine board, the idea having been originated by M. R. Buckett, assistant general manager.

Oregon Lumber Co. Modernizing

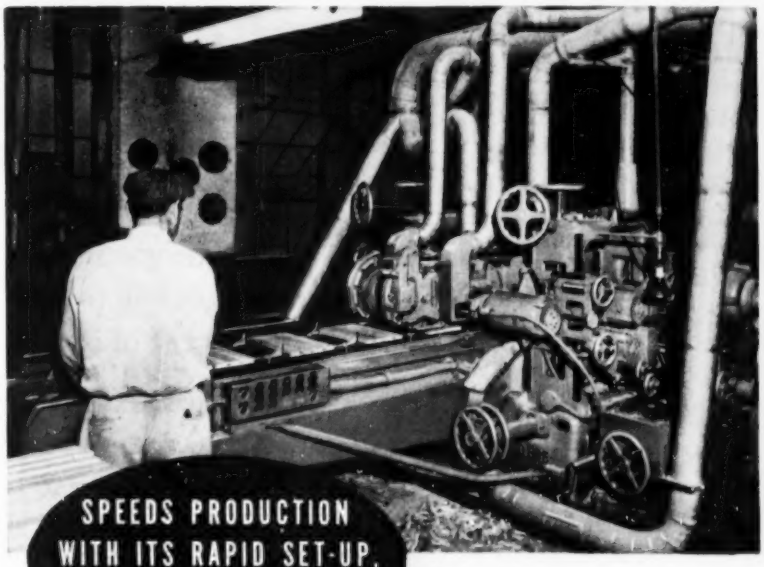
Oregon Lumber Co., Dee, Ore., has modernization program under way for improving its yard and lumber manufacturing facilities, according to James D. Wirrick, manager.

Previous to instituting this program the Dee plant operated without dry kilns, but three cross-circulation Moore kilns have recently been installed and placed in production. Since early this year Douglar fir boards and hemlock boards and dimension, to the extent of 30 to 40 per cent of the mill's cut, have been kiln dryed. All kiln dryed stock goes from kilns to planing mill for finishing.

Subsequent to installing the kilns a new Moore stacker and unstacker have been added, these units setting alongside the kilns. The stacker-unstacker start-up was scheduled for early March.

Improvements to be made later this year include hard-surfacing of the lumber yard and replacing the mill's circular headrig with 9 ft. Filer & Stowell band unit and F&S air-equipped shotgun feed carriage. This mill modernization, to be carried out during spring months, will convert the plant to a two band headrig operation rather than the previous one-band and one-circular headrig set-up.

Appointment of **K. L. Fitts** as manager of off-highway truck sales for Mack Motor Truck Corporation has been announced by **H. W. Dodge**, executive vice president. Mr. Fitts joined Mack in 1945 as a national accounts salesman, and in 1951 was made assistant manager of that division.



. . . Greenlee No. 545 Double-End Tenoner

Here's what California Furniture Shops, Los Angeles, has to say about their GREENLEE No. 545 Double-End Tenoner, which they purchased in 1948.

"We are particularly pleased with its rapid set-up, accuracy, and flexibility. Since the installation of the No. 545, we have not had a moment's production loss from breakdown or mechanical failure of any kind.

"Production has been higher and the quality of work better. In fact, when the need came for a double-end cut-off saw, we purchased the GREENLEE No. 542 because of the similarity between it and the No. 545 Double-End Tenoner.

"To anyone considering the purchase of a Double-End Tenoner, we cannot recommend the machine too highly."

This is just another example of the satisfaction and important production benefits you, too, can expect from this outstanding machine.

For, as "a woodworking plant in itself," it performs *15 separate operations* swiftly, accurately . . . even processes serpentine and other irregular shapes. And it steals job after job from single-purpose machines to streamline production, lower your costs.

Get complete specifications today . . . ask for Bulletin 545. Greenlee Bros. & Co., 1804 Twentieth Ave., Rockford, Illinois.

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GREENLEE WOODWORKING MACHINERY: MORTISERS • BORERS • SAWS • TENONERS • PLANERS • SHAPERS • MORTISING and BORING TOOLS

GMC salutes
WENTWORTH & IRWIN

on its 50 golden years

As every old-timer knows, not one of the past 50 years has gone by without Wentworth & Irwin adding to its store of friends and the weight of its reputation.

GMC takes especial pride in its link with this fine old firm, and extends congratulations on Wentworth & Irwin's splendid record of service to trucking in the great Northwest.

GMC Truck & Coach Division of General Motors

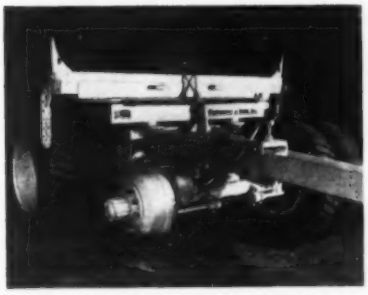
Latest News and Developments in the Machinery and Equipment Field

WORLD'S OLDEST GMC TRUCK DISTRIBUTOR, WENTWORTH & IRWIN, MARK FIRST 50 YEARS

Celebrating 50th Anniversary

The well known automotive firm of Wentworth & Irwin, Inc., Portland, Oregon, is celebrating their 50th anniversary in April. The firm was started in 1903 by George G. Wentworth and Charles G. Irwin as a carriage shop. Charles W. Wentworth, son of the late George W. Wentworth, is vice-president and general manager. Charles G. Irwin is still associated with the business.

The company now occupies two blocks on N.E. Oregon Street, one for the offices, sales rooms, factory and parts department, and the other for equipment display space. The parts department carries 15,000 items in stock for trucks and trailers.



Wentworth & Irwin plans to display their new No. 100 lightweight logging trailer at Eugene during the Willamette Valley Logging Conference sessions, under the direction of their Eugene dealer, A. B. Scarlett. New features claimed for this trailer are: Rugged as ever but lighter in weight; new reach tube with holes to make it lighter and still provide the same strength; new thick-leafed springs of special alloy; proven durability but much lighter in weight; hydraulic or air scales can be built in and not tacked on after trailer is built; simplified 3-point lubrication with large reservoir so essential to busy logger.

Wentworth & Irwin are the world's oldest distributors for GMC trucks having handled them in Oregon since 1912. They also build the well known Wentworth & Irwin logging trailers and transportation busses, more commonly known as "crummies", as well as one-piece, over-size, seamless lumber rolls for use on lumber hauling trucks.

Wentworth & Irwin plans to have a display of their new No. 100 logging trailer at Eugene during the Williamette Valley Logging Conference sessions, under the direction of A. B. Scarlett.

Wentworth & Irwin's Inc., large headquarters building on N.E. Oregon Street, Portland, Oregon.

Clark's Driver Training and Safety Movie

A new training and safety film for industrial truck operators has been produced by the Clark Equipment Company, Industrial Truck Division, Bat le Creek, Mich. The new 30 minute sound movie, titled "Safety Saves," was filmed at on-the-job factory and warehouse locations. It dramatically illustrates the "do's and don'ts" of safe driving, and shows the cause of most truck accidents and how to avoid them. For truck owners who want to reduce accidents and cut damage-to-goods, the new movie will be a valuable training tool. It is the only training film of its kind in existence.

The film was shown for the first time at the Conrad Hilton Hotel, Chicago, February 27. The "Safety Saves" movie was produced in response to hundreds of requests from truck users who expressed the need for a driver training film. "Safety Saves" will be available on a loan basis March 1st. For a reservation form, write the Clark Equipment Company, Industrial Truck Division, Battle Creek, Michigan.

New I.E.L. Fire Pump

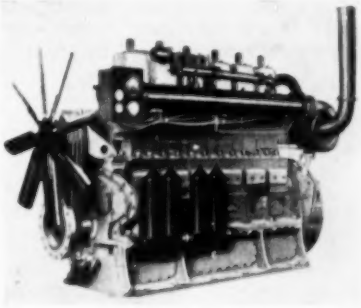
Announcement has been made by I.E.L. Power Saws, Inc., of Seattle, Wash., that they have an excellent new high pressure, 4 stage, self priming, centrifugal lightweight, portable fire pump, which provides up to 275# pressure per sq. inch. A new, improved hose is provided and is said to eliminate engine stalling. Also it is stated that the pump does not cause damaging pressure and will pump sandy or muddy water as well as clear water. It is manufactured by the manufacturers of I.E.L. power saws and I.W.L. chrome clad power saw chain.

Extends Turbocharging To Smaller Engines

The Waukesha Motor Company has extended the advantages of turbocharging to relatively small engines.

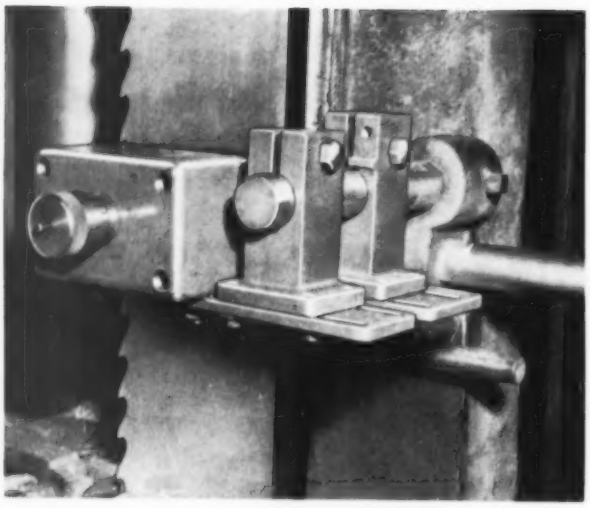
Five engine sizes—426, 779, 1197, 1905, and 2894 cu. in. displacement—are currently being produced as turbocharged units. Incorporation of turbochargers has produced substantial power increases and greater fuel economy.

Turbochargers have been applied to five basic diesel engine sizes, three for transportation or industrial service and the two largest as complete power units for industrial service. The 1197 cu. in. model is supplied either as a bare engine or complete unit. Extension of turbocharging into this light-weight, high-speed engine field is in the nature of a milestone and could well have lasting and far-reaching effects.



The Waukesha 6-cylinder turbocharged model LRDS develops 570 HP at 1200 RPM.

The primary reason for turbo-charging is to obtain higher specific output from an engine. This means a better horsepower/weight ratio, improved mechanical efficiency, and as a result of the latter, better fuel efficiency.



Ferrari Strain tension guide

Ferrari Strain Tension Guide

The Ferrari Strain Tension Guide is being used successfully on band mills and resaws by many operators in the West. The new guide improves resawing by providing more accurate work and faster speeds, smoother cutting and reduced kerf.

Art and Ernie Ferrari, brothers with more than 30 years combined experience as saw filers, foremen and planing mill machinery operators, installed their first tension guide in the Crane Mills, Corning, Calif., in 1951 after 10 years of research. The Ferrari guide has now been successfully installed on every type of resaw in use by planing mills, box factories and moulding plants. There are over 100 units in use in 50 Western plants. These operators, according to Ernie Ferrari, are making substantial savings in lumber by being able to cut right on the line with elimination of throw-outs at the sticker caused by saw snaking. The tension guide holds the saw firmly in line, assuring a straight cut. Quick setting up in saw changing is also claimed, plus lower maintenance and replacement costs of saws. A guide for sawmill band mills is also being used under operating conditions.

Reports on Barking in Scandinavian Mills

Den Riches, of the Seattle office of Hansel Engineering Co., Vancouver, B.C., designers of hydraulic barkers and chippers, has returned from a tour of Scandinavian and other European countries with the report that interest in his company's machines is growing overseas.

Necessity for a 12-month log storage before pulping has enabled European operators to consider barking their whole year's log requirements during the spring and summer, says Mr. Riches. At that season the mills have ample power and they are able to eliminate the winter barking problem—often severe because some of the mills are within 150 miles of the Arctic circle.

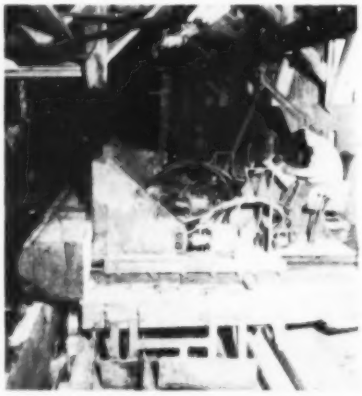
Hansel Engineering Co. reports Rayonier Inc. has ordered a barker for its mill at Jesup, Ga., designed to process 35 cords of southern hardwoods per hour.

Logging Truck Designed For 80-ton Loads

A White Sterling logging truck equipped with what is believed to be the largest rear axle in the industry is being operated by Hillcrest Lumber Co. in the Cowichan district of British Columbia as a test. The truck is expected to be able to handle log loads of 80 tons with ease, and considerably larger loads are contemplated when the vehicle is fully broken in. Motive power is supplied by a 300 h.p. Cummins diesel. Apart from its size and the special axle, the truck is conventional in construction. The axle was built by Kirkstall Axle Co. of England and it was originally developed for trucks carrying huge loads of oil pipe in Saudi Arabia.

The Kirkstall axle has planetary construction. An interaxle differential evens the driving on all wheels.

Island Truck & Equipment Co., Nanaimo, headed by John McCormack, has represented the White Motor Co., in connection with this particular installation.



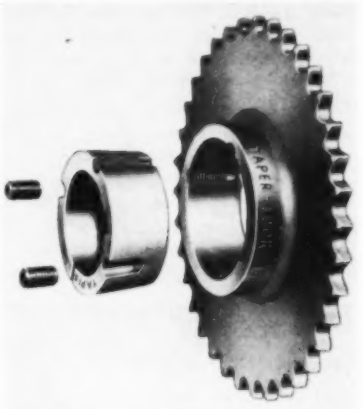
New Peters automatic carriage recently installed at Evans Products Co., Coos Bay, Ore. The carriage is the 24 ft. size with 3 block, 60 inch openings and heavy duty rack and pinions. A Peters hydraulic precision set works is used on the one man carriage. Peters hydraulically operated cant and board dogs are provided together with one hammer dog. The carriage has two hydraulic flippers together with hydraulic tapers on each knee as well as air cushions. ESCO alloy steel wheels and Timken roller bearings are used. All hydraulic pumps and valves are Vickers equipped.

Dodge Roller Chain

Announcement of a line of Taper-Lock sprockets and Dodge roller chain, which will be available from distributors' stocks, is made by Dodge Manufacturing Corp. of Mishawaka, Ind. The introduction of these new products marks the entry of this 75-year-old power transmission firm into the field of roller chain drives.

One of the chief advantages claimed for the new products is that they bring a new "off-the-shelf" availability to roller chain drives. This is achieved by the application to sprockets of the Taper-Lock principle, already proved in millions of V-belt, coupling, conveyor pulley and silent chain installations.

"Taper-Lock sprockets and bushings will be available in a range of sizes for the majority of industrial applications," said Harry A. Torson, vice president in charge of sales. "Dodge roller chain is made to the highest quality standards by chaftsmen who know chain



Type B Taper-Lock Sprocket (Exploded View) Dodge Manufacturing Corporation, Mishawaka, Indiana.

manufacture. Both chain and sprockets are made to ASA standards. Taper-Lock sprockets will take any make of American Standard chain."

Distributors will carry in stock for immediate delivery a complete range of B-type steel sprockets, 40 to 100 pitch.

American Distributor Named

Gearmatic Co., 736 Sixth Avenue, Vancouver, B. C., manufacturers of transmissions for the logging industry and a new line of winch drums, has appointed Western Equipment of Portland, Ore., as national distributors for the winch drum in the United States.

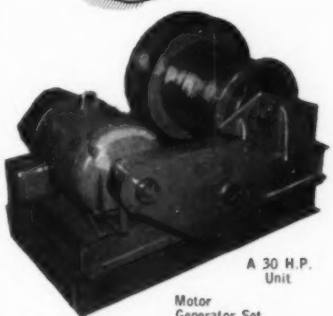
The new drum, sold as a package unit, was exhibited for the first time at the Intermountain Logging Conference in Spokane last month.

C & D Builds New Burners

The Cal-Pacific Lumber Co., Orick, Calif., owned by Yuba River Lumber Mfgrs., Grass Valley, Calif., is having the C & D Welding Works, Redding, build a 65 x 60 burner, for the new mill. C & D also built the conveyors for the **Diamond Match Co.**, sawmill at Lyman Springs, and they built a 50 x 72' steel drying shed for **Eastlick's Mill**, Fort Jones, Calif.

Millmen agree...

ZIDELL ELECTRIC
VARIABLE SPEED
CARRIAGE DRIVES
top the field!



A 30 H.P. Unit

Specifically designed for carriages, but adaptable for planers, edgers, niggers, or any application where variable speed, constant torque, and instant reversing is necessary.

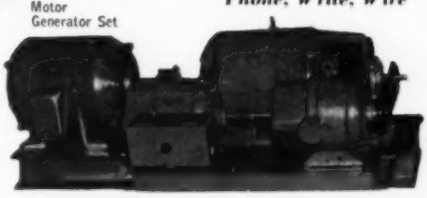
It's common knowledge . . .

Yes, among Millmen, it IS common knowledge that an Electric Variable Speed Carriage Feed Drive is necessary for an Efficient, Economical operation in the up-to-date-Sawmill. It is also common knowledge among these men, that ZIDELL builds the FINEST Variable Speed units on the market today.

Ask the Millmen who operate this drive and have acclaimed it "TOPS IN THE FIELD."

For further details Phone, Write, Wire

Motor Generator Set



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DRY KILNS—20 Tracks of Latest Moore Design. Capacity 1 Million Feet per Charge.

DRY SHEDS—Ample Storage Adjacent to Carline Means Dry Lumber for You.

DRY LOADING DOCK—Can Load 19 Cars Under Roof. Assures You Quick Shipment Regardless of Weather.

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In Our Quality-Precision Manufacture

The Ralph L. SMITH Lumber Company

WESTERN PINE ASSOCIATION WPA

ANDERSON CALIFORNIA

MILLS at Anderson & Canby, California

SALES OFFICE: Anderson, California

New warehouse of California Wire Cloth Corporation at Portland, Ore.

New Portland Plant

Newest of the California Wire Cloth Corporation's warehouses located at strategic points throughout the United States is the new plant at 1350 N. W. Raleigh, Portland, Ore. This plant has 35,000 square feet of space.

Charles Yon, Portland District Manager for the Corporation, stated that the company warehouses nationally known and accepted products such as Wickwire Rope, Realock Fence, Gold Strand Insect Wire Screening, Cal-Wic Industrial Cloth, Calwico Netting, Clinton General Purpose Fabric, Wickwire Automotive Springs and Formed Wires, Mechanics Wire, and the new Cal-Tie Wire; Welded Wire Pipe Reinforcement, Hardware Cloth, Coiled Baling Wire, Stone Wire, and a number of Wickwire Specialty items.

The Wickwire products come from the Corporation's six Eastern plants, formerly Wickwire-Spencer Steel. That company and the parent CF&I were merged in 1946.

Mr. Yon is in charge of the new warehouse with T. E. Hendrickson, R. F. Roach, C. H. Taggard, M. L. Alter, and D. L. Lister assisting him in an effort to broaden and improve the sales service to this important market area in the Northwest.

In 1937 The California Wire Cloth Corporation founded in 1859 was acquired by CF&I. Since then the corporation has grown in size until today it is the 9th largest producer of steel in the Nation. The recent purchase of the John A. Roebling's Sons Co. on December 31, 1952 shows that this growth is still continuing.

Dominion Gang

The O. & C. Lumber Co., 25 miles East of Eugene, are operating steadily with a Dominion gang mill. Owner and manager of the mill is Douglas Orme of Eugene. The mill was sold and installed by Fred E. Barnett Co., Oregon distributor for Dominion Bridge Co. Ltd.

Phelps Burner Sales

Roy Phelps, president of Phelps Brothers, manufacturer of burners in Eugene, Oregon, recently set quite a record in selling and travelling by car. On a Wednesday he sold a 40x30 ft. Phelps burner to the Rein Lumber Co., Independence, Oregon; on Thursday he sold a 45x50 burner to Baird-Naundorf Lumber Co., Spokane, Wash.; on Friday he sold a 40x40 ft. burner to Fogarty Bros. of Missoula, Montana. Then on the following Tuesday he sold a 50x40 ft. burner to Stevens & Wittick Lumber Co., Powers, Oregon.

Other recent burner deliveries include a 40x30 ft. to Eri Lumber Co., Troutdale, Oregon; and a 35x30 ft. to Interstate Shingle Co., Independence, Oregon.

New Logging Supply Firm in Toledo, Oregon

The Coast Equipment Co., Toledo, Oregon, an enterprising logging supply firm is owned by Wayne D. Neal and his sons Lloyd and Lawrence. They also own the Wayne D. Neal & Sons Logging Company. They handle Skookum blocks, Broderick & Bascom wire rope, Hoe saw bits and shanks, Mall power saws, West Coast logging shoes and other items. They also do eye splicing and ferruling for their customers. Mr. R. H. Byrd is manager.

Stetson-Ross Planers

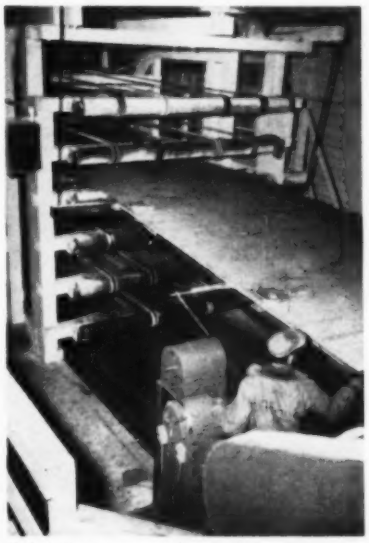
The Long-Bell Lumber Co. recently started operation of their new, modern planing mill at Vaughn, Oregon. Included in the equipment are a 612-C-1 Stetson Ross planer with a #505 feed table, Irvington trimmers, and Moore Dry Kiln reloaders.

Recent installations of #612-C-1 Stetson Ross Machine Co. planers were made to Fir Manufacturing Co., Myrtle Creek, Oregon; and to the Weyerhaeuser Timber Co., Longview.

Veneer Tray Control

Announcement has been made by C. W. Ostrom, president of C. Kirk Hillman Co., Seattle, of expanded manufacture of the new Kirk Hillman tipple hoist controller.

Already accepted and in use in several West Coast mills including the Simpson Logging Company veneer plant in Klamath, California, the controller is used for tipple to the tray system and has a pre-selector device. The operator selects the next tray in advance and the control unit moves the tipple to the correct position on the operator's signal. A panel of lights can



Kirk-Hillman control for tipple to 6-tray system. Operator's station is effectively placed.

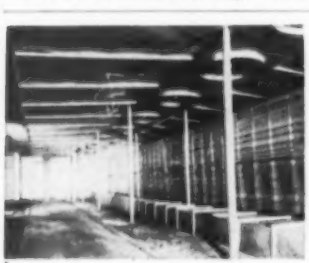
be mounted in any position in front of the operator to facilitate fast selection and efficient use of the tray system.

The control is cam operated, completely enclosed, and can be effectively placed at the operator's station.

Kirk Hillman has also supplied two lathe drives, a six motor tray drive, and a two clipper tray drive system in the Klamath mill.

Edwards Rope Dealer

Tom Roeser of the Roeser Supply Co., Corvallis, Oregon, was recently appointed a dealer for Edwards wire rope. Roesser is an old logger having logged in the Rainier, Oregon, area for many years.



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EFFICIENT . . .

Clear Kiln Interior

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Hydraulic Rams • Crankshafts
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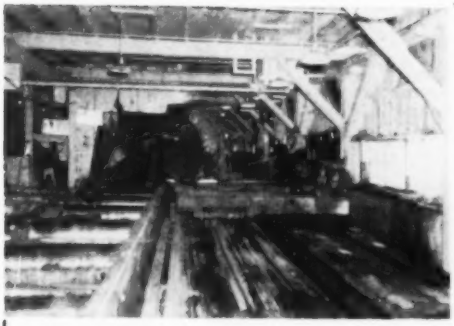
Fox and Holly Sts. • Seattle 8, Washington



A select redwood log is shown here on the sawmill carriage at Rockport, being made into quality lumber.

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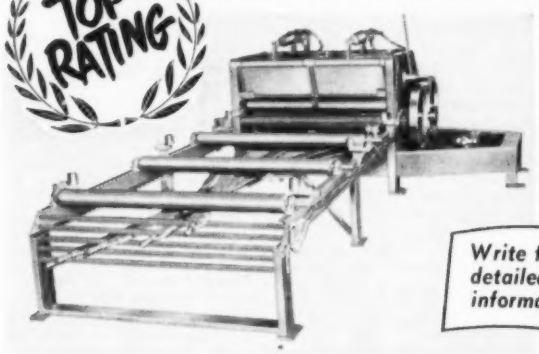

SALEM Eastern or Stub EDGERS

Check These Features:

Extra-heavy, electric-welded all-steel frame. Hard chrome edger arbors. Four fluted feed rolls of machined steel, fitted with high-speed, self-aligning ball bearings. Greater operator visibility of saws. Toggle design of unit eliminates any lumber "kick-back".

6 SIZES
3 TYPES

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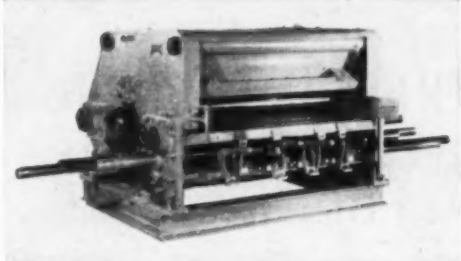
Fine Sawmill Machinery for 50 YEARS



I. W. JOHNSON 4 x 30" edger with anti-friction bearings. Can be seen at Pacific Lumber Co., Scotia, Calif., Coast Redwood Co., Arcata, Calif., and Aloha Lumber Co., Aloha, Washington.

It takes a combination of good merchandise, prompt service and honest dealing to satisfy customers for half a century . . . but I. W. Johnson Engineering Co. has been doing that job and doing it well. Perhaps we have the answer to your machinery problems.

Air Dogs
Rolls, Skids • Resaws
Turners, 10" and 12"
Carriages, complete
Edgers, 4"-6"-8"-10"-12" openings
Niggers, 7" x 9" and 8" x 10"
Shot Gun Feeds, 8"-10"-12"-14"

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TRADE MARK I.W. JOHNSON ENGR CO

Trimmers, Automatic, Smooth End, etc.
Gears, Transmissions
Feed Engines, Straight Connected and Geared
Trout Type Power Setworks for Rack and Pinion and Screw Block Carriages.

I. W. JOHNSON ENGINEERING CO.

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Nylund Belt Sander

Nylund Dual Belt Sander

An interesting improvement has been made in belt sanders in the Nylund dual belt sanders, being manufactured by the Peninsula Iron Works, Portland, specialists in plywood and veneer machinery. They developed this machine in conjunction with John Nylund, sander foreman for Portland Manufacturing Division of M & M Plywood Co. Mr. Nylund drew upon his 30 years of production sanding experience in the door and plywood industries.

The illustration shows the improvement in this belt sander as compared with the conventional style. It is a precision made machine of all welded steel built to give many years of service.

It is reported that the machine will speed up production because it can be used for both cutting and polishing and eliminates the moving of stock between the two former types of machines. It also requires only half the floor space. The illustration shows the lever used for operating the buffer bar.

Mater Dealer Conference Stresses Modernization

Modernization of Sawmill Machinery was the theme of the two day Mater Dealer Conference held at the Mater Machine Works plant in Corvallis, Ore., on February 23 and 24.

Dealers who handle Mater Sawmill Machinery throughout the West studied new developments in mechanization and modernization of mill operations, stressing air and remote control operation of carriages and deck equipment.

Participating in the Dealer Conference were: A. S. Soulages and Gene Woleveke, Idaco Co., Oakland; E. C. Wilkerson, Frazar-Hanson, Ltd., San Francisco: Chuck Moore, Worth-Petre, Salem; Ed Leeb, Bruce Welsh, R. Mullin, Jack Bean, Gordon Hauck, The Portland Machinery Co., Portland; Ed Setzler, Walt Garner, Neal Weaver, Cal-Ore Machinery Co., Medford, Ore.; Tom McMenus and Otis O. Miller, Miller Machinery Co., Missoula, Mont.; Dick Davis, The Oilgear Company, Beaverton, Ore.,; J. W. Potter, T. E. Morgan, Mr. McDonald, Canada; Henry Irving, G. P. Guenther, Everett Rector, and Ray Keller, Washington Machinery & Supply Co., Spokane, Wash.; Jess Snider, Grants Pass, Ore.; H. B. McLine, J. C. Carleton, Carlmac Manufacturing Co., Eugene, Ore.; Professor West, Oregon State College, Cornvallis, Ore.; Mr. R. T. Titus, Western Forest Industries Review, Portland, Mr. J. B. Olson, The Lumberman, Portland.

A. E. Stebinger, sawmill of Roseburg, Oregon, now have sales and executive offices in suite 623 Terminal Sales Bldg., Portland, Ore.

Penn Salt Adds to Portland Site

Pennsylvania Salt Manufacturing Co. of Washington has purchased 22 acres of land adjacent to the company's 58-acre site and plant at Portland, Ore. This purchase, made for around $65,000, includes 790 feet of Willamette River frontage. Glen E. Moore, general superintendent of Pennsalt's West Coast operations, said the present $6 million Portland plant had pre'ty well filled the company site area. This recent purchase was made without specific plant expansion in mind.

Shown herewith left to right are C. N. MANSUR, general sales manager, Simonds Saw & Steel Co., Fitchburg, Mass., and FOSS B. LEWIS, Northwest manager, Portland, who were in charge of Simonds' annual Pacific northwest sales meeting held in Portland. Other important folks attending were W. B. Ilko, general sales manager of the Simonds Abrasive Co., Philadelphia; Don Weston, manager of Simonds Canada Saw plan at Montreal, also in charge of all the Canadian branches; Phil Quelch, manager of the Vancouver, B.C. branch. All the sales and shop employes of the Portland branch attended the dinner on February 27.

LOOK! THINK WHAT YOU CAN SAVE NOW ON LOAD BINDERS . . .

WITH YOUR COMPANY NAME BUILT INTO THE HANDLE

STOPS LOSSES!

Dollars saved are dollars earned!

NOW Canton can put your company name on the handle in raised letters. NOW large or small fleets SAVE from 50 to 100% by cutting off theft and loss. NOW marked as your property, they always find their way back to you. EXTRA COST? Just slight additional on your first order, NO COST on orders thereafter. This revolutionary money-saving program will be handled through established distributors nationally, but write the factory NOW for information.

Canton Binders — with or without take-up action — have non-spreading clevises, rugged I-beam handles, full swivels, heat-treated drop-forged hooks. Each individually tested and guaranteed against spreading or breaking.

CUT COSTS! Save time when you use new, popular CLEVIS GRAB HOOKS. Now available.

NEW HINGE-GUARD LOAD PROTECTOR

CANTON MANUFACTURING CO.

ALL THERE IS IN LOAD BINDERS

A SUBSIDIARY OF CANTON MALLEABLE IRON CO.

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NEW ENTERPRISE FEED WORKS

- Clutch type: No frictions, no belts
- 20 hp capacity
- Easily-installed on all Model 34 Sawmills

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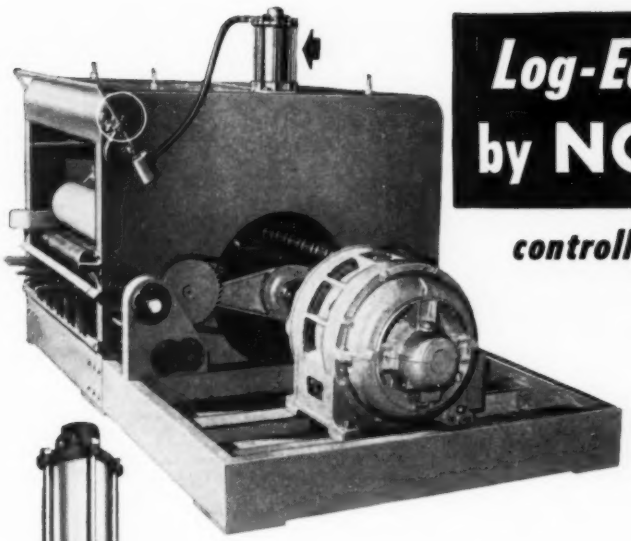

Log-Edger Feed-Rolls lifted by NOPAK Cylinder

controlled by NOPAK 3-Way Air Valve

This Pacific Coast type log edger, manufactured by Albany Machine & Supply Co., Albany, Ore., employs an 8" NOPAK Model "D" Single Acting Air-Cylinder to lift the heavy feed-rolls by means of lever arms. This permits feeding of various sized cants as required. The cylinder is actuated by a 3/4" NOPAK, 3-Way Air Valve, equipped with lever extension-bar enabling the operator to manipulate it from any point in front of the machine. Weighted valve lever, when released, lowers rolls to "feed" position. Heavy springs prevent the feed rolls from dropping full length of cylinder stroke when machine is "empty."

This comparatively simple application may suggest how you can employ NOPAK Valves and Cylinders in your plant or product to actuate and control machine movements.

NOPAK Model "D" Air Cylinder for Right Angle Flat Base Mounting, Rod End.

Refer to Sweet's File for Product Designers or write for Bulletin SW-1.

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VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE
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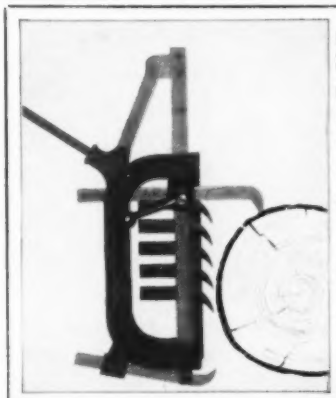

presenting the new
McDONOUGH NON-DEFACING
CARRIAGE DOG.

- Greater Capacity—3½" to 20" cant . . . 48" diameter logs.
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- Cam Lock—positive . . . fast . . . powerful.
- Movable Spur Dog — grips logs up to 48" diameter.

GREATER CAPACITY PLUS GREATER VERSATILITY. Speed up production and improve quality with NEW McDONOUGH NON-DEFACING CARRIAGE DOG on your carriage.

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SPEEDS FALLING

are BOTH light and strong . . . easy on your saw and easy on your back! We manufacture a size and shape for every falling or bucking job.

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REDUCE COSTS with STETSON-ROSS

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TIMKEN TAPERED ROLLER BEARINGS
TRADE-MARK REG. U. S. PAT. OFF.

NOT JUST A BALL ○ NOT JUST A ROLLER ⊃ THE TIMKEN TAPERED ROLLER ⊃ BEARING TAKES RADIAL ◐ AND THRUST —◐— LOADS OR ANY COMBINATION ✳

Two changes in Hyster Company's sales promotion staff have been announced by Dar Johnson, department head. Thorsten B. Pearson has been named administrative assistant and Wilton G. Smith has been transferred from the eastern division sales department to head up industrial truck promotional activities. Both men have had long experience in many phases of company activity. Smith has been with Hyster seven years, with broad experience Pearson has been with Hyster since 1946, after serving 4 years in the Coast Guard.

JAMES OLIVER, named Hyster Co., district manager for Northwest including Washington, Oregon, Idaho, part of Northwest California, Western Canada and Alaska. Oliver joined the Hyster organization in 1942.

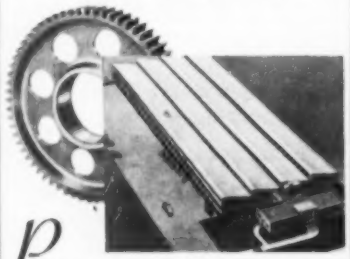
HOLLIS CONNER named resident manager for Hyster sales activities in Australia and the South Pacific. He will work closely with Sonnerdale Ltd and Steel Weld Ltd., who make Hyster equipment in Australia.

WILLIAM M. CAMPBELL who succeeds Theron Howard as manager of the Peoria, Ill., division of the Hyster Co. Campbell has been with Hyster since 1940 starting in Portland. Succeeding Campbell as office manager in Peoria, is R. B. BENGSTON.

Zidell To Display Drive

Warren Stewart, sales manager for Zidell Machinery & Supply Co., Portland, has announced that the Zidell Electric Variable Speed Drive will be on display at the Willamette Valley Logging Conference April 23-25. This drive is designed specifically for carriage feeds, but adaptable for any drive where instant reversing, constant speed and extreme flexibility are needed. Zidells cordially invite all conference attendents to drop in and see this unit in operation.

Could You Furnish Proof of Loss In Case of Fire



PLANT ledgers and book records are usually entirely inadequate in establishing proof of loss in case of fire. Changing values and continual plant improvements are important reasons why you should consider a General Appraisal. Here in one compact volume is a factual record of all plant assets, showing replacement values, present values and insurable values. A recognized authority . . . a positive proof of loss.

GAC GENERAL APPRAISAL COMPANY

SEATTLE LOS ANGELES
PORTLAND SALT LAKE CITY
SAN FRANCISCO VANCOUVER, B. C.

C. A. Harris & Son Inc., Add New Moore Kilns

In 1917, C. A. Harris & Son, Incorporated, Ardenvoir, Wash., started operating in the Entiat Valley. In 1939 they moved to their present location, where they have an annual production of 11,000,000 feet of lumber. They produce commercial grades of lumber, also apple and pear box stock for local consumption in the Wenatchee, Entiat and Chelan fruit-growing areas. The cut is approximately 65 per cent ponderosa pine and the balance Douglas fir and mixed species. The commercial lumber cut runs principally to 4/4 and 5/4 box and selects and #2 and #3 common. Sales are handled by Ballantyne Lumber Company who have offices in Wenatchee, Wash., and Baker, Ore.

The 7 ft. double cut band mill has a daily capacity of 65,000 feet per shift. One new 7 ft. resaw and merry-go-round have recently been installed.

To improve the quality of their production, new Moore Cross-Circulation kilns have recently been installed. These new kilns are of the side loading design and consist of one room 40x20' and one room 40x24' in size. The buildings are of reinforced concrete construction employing steel trusses and 6" wood roof. Doors are provided on each side of the buildings for loading and unloading kiln charges with a lift truck. The 72" fans in these kilns provide a large volume of air circulation to uniformly dry the lumber and are driven by a 30 h.p. motor which is equipped with automatic reversal feature so that it is not necessary for the kiln operator to reverse the direction of air circulation by hand. Moore Steam Pressure Controllers automatically regulate the flow of steam to the kilns at all times to suit the requirements of the lumber being dried.

In addition to these modern kilns, the planing mill and box factory capacity are being increased by the installation of a 25" motorized planer.

Arden Harris is president of C. A. Harris & Son, Inc., and Meredith Harris is vice-president. Operations are under the direct supervision of H. M. Thomason, secretary-treasurer, who is assisted by Floyd Smart, master mechanic, and E. L. Bradley, box factory foreman. William Williams is sawmill foreman and D. E. Wolf is in charge of the kiln drying operation.

New Moore Cross Circulation sideloading type dry kiln at C. A. Harris & Son Inc., sawmill, Ardenvoir, Wash.

YOU CAN COLLECT SAWDUST AND SHAVINGS WITH
FORT WORTH PNEUMATIC CONVEYING SYSTEMS

Fort Worth Industrial Fans are designed for efficient operation in handling materials by air. Fort Worth also manufactures complete blow pipe systems and can furnish experienced sales engineers to design an installation "tailor-made" for your requirements.

FORT WORTH

S-2 EXHAUST FAN has many features that assure satisfactory operation

- ★ Direction of discharge easily changed
- ★ Direction of rotation easily changed
- ★ Housing, blastwheel, and bearing stand are ruggedly constructed for vibration free operation
- ★ Designed for efficient operation
- ★ Exclusive Paddle-type construction enables blastwheel to handle long stringy material through fan.
- ★ Bearings: two anti-friction, self-aligning pillow blocks

Write for catalog 500, which gives performance data and dimensions of Fort Worth Exhaust Fans.

FORT WORTH STEEL & MACHINERY CO

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Sales Office:
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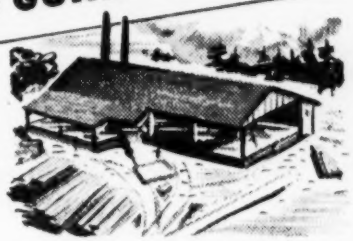
For Sawmill Equipment it's GUNDERSON!

Fast, Modern, Profit-Making Machinery



Gunderson equipment is custom built...to fit your individual operation. Incorporates every tested feature for high-capacity, low-cost production. Now Gunderson brings you a unique new service... erection of all machinery and mill buildings—any units you wish, or a complete mill.

MILL EQUIPMENT
All Steel Sawmills
Portable Skid Mills
Portable Gang Mills
Band Mills—60" & 72"
Resaws—54", 60" & 72"
Line Barfeed Tables

PLYWOOD EQUIPMENT
Barkers
Trimmer Saws
Skinner Saws
Cold Presses
Hot Presses

Write or call for Specifications and prices

GUNDERSON BROS.
ENGINEERING CORPORATION
Steel Fabricating Division
4700 N. W. Front Avenue
Portland 8, Oregon

Equipment-Deliveries

Trinity Logging Co., Redding, Calif., recently took delivery of two Allis-Chalmers HD15 tractors, equipped with Carco 'dozers and winches, from Moore Equipment Co.

Moore Equipment Co. also delivered a unit crane to be used for log loading powered with a Hercules gas engine to the **L & J Logging Co.**, Hyampon, Calif.

Shasta Box Co., Redding, Calif., is installing an 8 x 10 Hill nigger purchased from the Klamath Iron Works, and a Cochrane water heater for boiler water.

American-Marietta Takes Over Portland Glue Plant

American-Marietta Co. has taken over the management of the Portland, Ore., glue manufacturing division formerly wholly owned by United States Plywood Corp. The business is being operated under the name of Adhesive Products under the direction of E. R. Dodd, Vice President in charge of American-Marietta's Northwest operations.

Production operations at Portland are controlled by E. D. Tower who was formerly American-Marietta's Plant Superintendent in Seattle.

Sierra Tractor Appointments

Carter Sullivan, formerly manager of the Gridley store of Sierra Tractor & Equipment Co. has been made manager of the store at Chico, Calif. **Del Wible** has been appointed purchasing agent for all stores. He makes his headquarters in Chico.

Homelite Opens New Portland Branch

The opening of a new branch office in Portland for the Homelite Corporation—plus several promotions—are reported by Douglas Sherwood, Homelite district manager, Seattle.

The new Portland location, with complete sales and service facilities, is located at 3436 S.E. Milwaukie. The branch manager for the Portland area is Guy Sabin.

The new building, containing 3200 sq. ft., will house offices, warehouse, shop and display space and rental department for the entire Homelite line of chain saws, pumps and light plants.

The chain saw department will be headed by Miles Davis, a long time Homelite employee. The chain saw department is being greatly enlarged and dealer organization is expected to double this year in Oregon.

A completely equipped service department will service dealers in all of Oregon and Southern Washington for the entire Homelite line, and will be headed by Dick Norris, a likeable and efficient shop foreman.

The promotions announced by Sherwood include: Gordon Forsythe to manager of the Homelite Seattle branch; William Ralston to manager of the Roseburg, Oregon branch; and John Cram to manager of the Spokane branch. Allen Campbell was just recently appointed a salesman out of the Spokane office.

Interstate Tractor and Equipment Co's. new branch store in Coquille, Oregon, located on Highway 101, the new store provides complete parts and mechanical service for owners of "Caterpillar" diesel tractors, engines, and roadbuilding machinery, Skagit loading hoists, Trackson shovel loaders, Hyster tractor equipment, Young rigging and U.S. Steel wire rope. Manager Harry C. Sanford is well known from his many years work in the area as a young man well acquainted with heavy equipment.

Left to right: ED. E. CONE—Cone Lumber Co., Goshen; BEN C. WHEELON—Wesco, Branch Sales Supervisor; JACK MORELAND—Branch Apparatus & Supply Sales Manager, Wesco; BILL CARMODY—Application Engineer, Welco; A. E. McPHEETERS—Owner McPheeters Electric; ARDIN L. SCOTT—Application Engineer, Welco; RAY T. KILLEN—Agency & Construction Engineer, Welco; BOB SEABURG—Apparatus & Supply Salesman, Wesco; DAVE HOFFMAN—Sales Electrical Engineer, Welco.

Westinghouse Electric Meeting in Eugene

An interesting evening was enjoyed by some 200 mill men and industrial operators and their wives at the Osburn Hotel, Eugene, Oregon, February 24th. The meeting was sponsored by McPheeters Electric, Eugene area dealers for Westinghouse. Mr. Ed E. Cone, well known lumberman of Goshen, Oregon, was toastmaster. The Lumbermen's barber-shop quartet gave some fine demonstrations of their talent. Le Roy Orth of McPheeters Electric sang several solos and lead in the group singing.

Some very fine moving pictures were shown of Westinghouse Electric mammoth, precision manufacturing facilities, as well as of special applications in the lumber industry.

One of six Kenworth trucks and six Page and Page trailers fully equipped with Gillette super traction logging tires. The units are owned by the B.C.K. Logging Company of Prineville, Oregon. The order—for more than 100 Gillette 1200 x 24 tires and tubes—was handled through Mike DeCicco and Son, Portland, Gillette distributors.

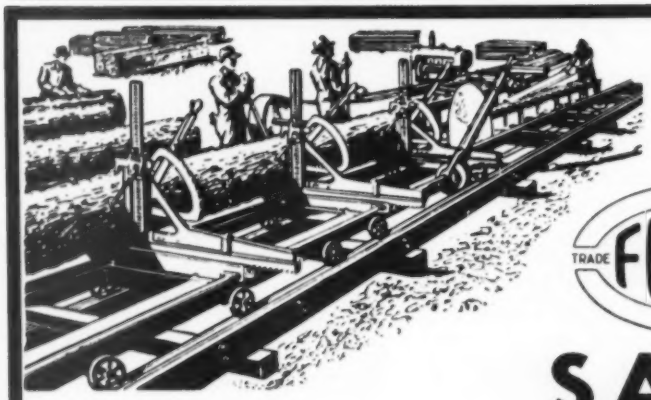
Machinery Personals

A. F. Fraser has been named Caterpillar Tractor Co. district representative in the Maritime area with headquarters in Fredericton, New Brunswick and will work with Wm. Stairs, Son & Morrow, Ltd., Newfoundland Tractor & Equipment Co., Ltd., Tractor & Equipment Ltd., A. Pickard Machinery Ltd., and Standard Construction Co., Ltd., Caterpillar dealers in Canada and Newfoundland.

Gilbert J. Schuelke has been named assistant salesmanager of the Chain Belt Company's chain and transmission Division. He started with Chain Belt Company in Milwaukee, Wis., in 1936 as an engineering apprentice.

William C. Ridge has been appointed Works Manager in charge of the manufacturing operation of the Trenton and Roebling, New Jersey plants of the John A. Roebling's Sons Corporation. The John A. Roebling's Sons Corporation is a wholly-owned subsidiary of The Colorado Fuel and Iron Corporation.

Walter M. Novak, recently appointed general manager, of Rogers Machinery Co., Portland, Ore. and Seattle, Wash., distributor in both states for Gardner-Denver air motors, compressors and accessory air equipment. E. A. Rogers is president. Roy Farris is manager of the Seattle branch at 615 8th So. Henry Connelly is sales representative in Eugene, Ore.



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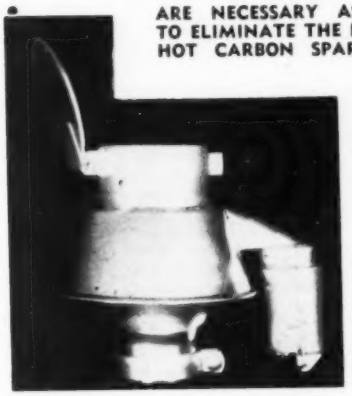

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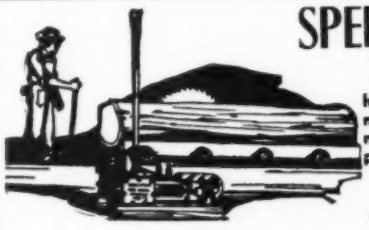

helps the small and medium size sawmill to make a profit through GREATER PRODUCTION without increased expense.

Uses no more steam than belt or friction feeds. Less expensive to operate. Much faster. Full details in Catalog W. Yours for the asking.

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PRESCOTT, SEATTLE TRIMMERS
MECHANICAL LIFT, CHAIN DRIVEN

This 28' Prescott Trimmer is shown in operation at the Long-Bell Lumber Company plant, Vaughn, Ore. It is one of a great number of trimmers which the Seattle company has installed in various mills in the Pacific Northwest.

OUTSTANDING FEATURES . . .

1. Maximum power on saw with minimum space.
2. Constant saw speed maintained, regardless of depth of cut.
3. Any number of odd foot spacings obtainable.
4. Lift units insure positive, fast action at all times.
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7. Furnished with steel truss and table completely assembled.

Hundreds of Successful Installations!

Write for complete data and specifications to

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MODERN SAWMILL MACHINERY
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Completely Packaged Air Dog Conversion Kits
write for details

Standard and Automatic Carriages
Oilgear Feeds,
Decks
Edgers

The appointments of Donald M. Grimes to head retail sales and Donald F. Pennell to serve as chief of wholesale sales of Kenworth trucks under the newly appointed sales manager R. D. O'Brien, and Charles R. (Chuck) Bechtol to be personnel director, have been announced by John G. Holstrom, vice-president and general manager of Kenworth Motor Truck Corp., Seattle. Grimes (left) has been with Kenworth nearly 25 years. Pennell (center) joined Kenworth's engineering department in November, 1936, transferring to the sales department in 1938. Bechtol, (right) recently resigned as assistant director of Athletics at the University of Washington, Seattle.

Zidell Electric Carriage Drive

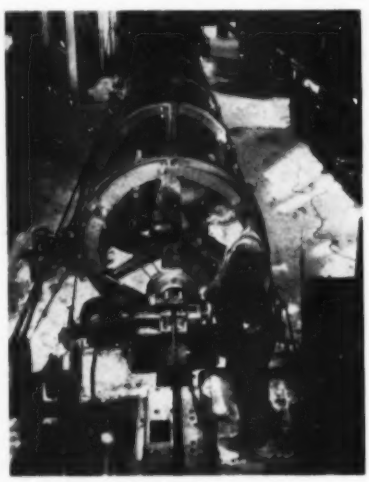
Zidell Machinery & Supply Co., Portland, Oregon, recently delivered a 50 HP Zidell D. C. Electric Carriage Feed Drive to Harris Brothers Lumber Co. of Boise, Idaho. This new unit will replace a 10" steam shotgun and will operate on a Klamath Iron Works band mill. Harris Brothers also installed a Monarch Forge band mill with cutting capacity of between 35 & 40 M feet per day. At the present time, they are sawing principally pine boards and some fir—6 months ago Zidell supplied the Producers Lumber Co. of Boise, a 30 HP Electric Variable Feed Drive which greatly assisted in the sale to Harris Brothers.

Esco Rooter

Riley Logging Supply Co., Eureka and Crescent City, Calif., now distributors in that area for the Esco Buck Forte Rooter, has delivered units to the Union Lumber Co., Fort Bragg, and to Bob Wheeler, Blue Lake logger. According to Cliff McKnight, general manager, Riley Logging Supply Co., the Esco Buck Forte Rooter, cuts 'dozing costs up to 50%. It roots and 'dozes in the same pass.

E. H. Edwards Co., to Expand its Plant

E. H. Edwards Co., has plans in the formative stage for additions to its South San Francisco, Calif., wire rope and fish trap netting plant. This was revealed last month when plans were discussed in South San Francisco with company executives during a tour of the Edwards plant by members of the industrial and financial press.



The 40 year old firm is engineering additions to its rope shop and other sections of the plant. The expansion of the rope plant would extend a 60' bay into what is now a parking area. Installation of new production equipment is also blue-printed for the near future.

Actually, the additions are part of a two-fold program started a year ago, according to Sterling Edwards, president of the company. Major additions to the plant during the past two years include a new 3,600 sq. ft. office building and two new wire making machines.

In 1949 the actual owners of the E. H. Edwards Co. began to take a more active part in management which resulted in the following change of officers: L. Sterling Edwards, president; Kermit Williams, executive vice-president and secretary; Russell Hendrick, vice-president in charge of sales; Norman MacEachen, treasurer; and Cynthia Williams, assistant secretary.

During the period 1946-52 the company experienced a 30% increase in sales volume, and production of its finished products rose to between 12,000 and 14,000 tons.

President Edwards anticipates a healthy year in the wire rope and specialty product line. Sales this year should be as good, if not better than last year, Mr. Edwards said. He is also looking forward to a slight increase tonnagewise.

Principal customers of the company's wire rope are the lumber, petroleum, and construction industries. The company manufactures 140 different types of wire rope ranging in size for 3/16" to 2¾".

The company was formed by E. H. Edwards, a native San Franciscan, in 1912.

LEFT: One of the final steps in the manufacture of E. H. Edwards wire rope. This is a closing machine where wire strands are led through a head and are converged around a core as they pass through a precision die.

NEED MORE INFORMATION?
SEND FOR YOUR *BULLETINS* TODAY...

Check the list below. Simply circle the number of the bulletin you want; mail us the coupon with your name and address; and we'll see that the information you want reaches you promptly.

1. A new 36-page Book No. 2519 on herringbone gear drives just published by Link-Belt Co., offers detailed information about Link-Belt single, double and triple reduction enclosed herringbone gear drives. Installation photographs in Book 2519 show examples of these drives in many types of heavy duty service. The horsepower rating tables contain many new ratios. Ratings for input speeds of 720 to 1750 r.p.m. are given for all drive sizes. Complete instructions for correct selection are provided, including new overhung load tables and a table listing load classes for 170 types of machines. Book 2519 lists 39 sizes of drives in 534 standard ratios, from 2.84:1 to 326:1. Capacities range from 0.4 to 2480 horsepower, and output shaft speeds range from 2.2 to 623 r.p.m.

2. A unique and informative new booklet on diesels, written in simple, non-technical language, has just been published by the P&H Diesel Division, Harnischfeger Corp. Entitled, "What You Should Know About Diesel Engines," it effectively calls upon the grade school "primer" technique for both telling and illustrating the diesel story. The booklet records the diesel engine's invention and early development; compares it with the gasoline engine; tells about the 2-cycle and 4-cycle types of diesels; explains its operation in simple pictures and words; and reports latest advancements in modern diesel engine design.

3. The inside story of the General Motors Torque Converter, now an integral part of a number of GM Diesel engine models, has just been published by the Detroit Diesel Engine Division. The book is well illustrated with cutaway drawings, curves showing the horsepower characteristics of engines so equipped and photos of torque converter units at work in typical installations in the industrial, construction, logging and petroleum fields.

5. A new bulletin on Baldwin-Rex Roller Chains and Sprockets has just been published by Baldwin-Duckworth, division of Chain Belt Co. The 54 page book describes the inherent advantages of roller chain, and illustrates all the popular sizes of Baldwin-Rex Roller Chains. A section of the bulletin is a treatise on "how to select standard roller chain drives" . . . with formulas, tables and examples illustrating this procedure: Roller Chain dimensions, strengths, weights, and prices are included.

6. A new 4-page bulletin on Prescott-Seattle edgers has just been published by the Prescott Iron Works, according to William Wallace, manager. The new bulletin describes fully the Prescott line of eastern and Pacific Coast type edgers, including specifications and photographs.

A copy may be had by writing the Prescott Iron Works, 1 West Lander St., Seattle, Washington.

7. Forth Worth "QD" Sheave Specification Guide #83 gives dimensions and weights of QD V-Belt sheaves and hubs manufactured by Fort Worth Steel & Machinery Co. Construction features are described by cut-away photographs and installation and removal instructions are illustrated by pictorial panels. Tables and line drawings give complete hub and sheave dimensions including face width, hub position, hub length, minimum and maximum bore, as well as dimensions of standard keyway.

8. The Oliver Corp. has available a catalog on their new "OC-18" Industrial Tractor "The Tractor With Air Steering." This literature explains how this large tractor, with 133 drawbar horsepower, can be operated with unusual ease. Included are application photographs, diagrams and sketches as well as complete specifications.

MAIL THIS COUPON TODAY!

Apr. 1953

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Hotel Raleigh in the heart of official Washington is the headquarters for all tourists and business people. 400 immaculate air-conditioned rooms, excellent cuisine, and the famous Pall Mall Room. Write today for our booklet or HONEYMOON brochure. Or see your travel agent.

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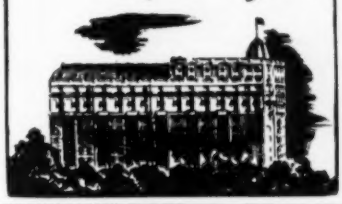

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READY for assembly with all bolts and directions. Easy to dismantle and truck to new location. Daily capacity 10,000 to 150,000 board feet out.

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This picture was taken at the World Bestos Replacement Sales Divisions' annual national Sales Conference at the home office New Castle, Indiana. World Bestos regional and district representatives attending the four day session heard a report of the company's progress during 1952 presented by William J. Hanfeldt, President and General Manager. W. F. Rogge, General Sales Manager, outlined in detail the new 1953 sales program, concentrated on World Bestos complete line of passenger car, bus and truck brake lining and brake blocks. A general review of 1952 showed that the highly successful RED BLOCK (J Combination Block Sets) continued to accelerate in sales, with an even greater increase anticipated for 1953.

Timken Co's Expansion Program

A. L. Bergstrom, Vice President in Charge of Engineering at The Timken Roller Bearing Company, has announced a multi-million dollar expansion and program for that company's Bucyrus, Ohio plant. The Wigton-Abbot Corporation of Plainfield, New Jersey will be responsible for the design and construction of the project which is estimated to cost approximately $1,250,000.

New machinery and production equipment for the manufacture of bearing parts will be installed in the Bucyrus plant and should be in full production by the end of 1954, the Timken Company official stated.

New Yarder-loader

Shown herewith is a Model #100 Portland Crane & Tractor Co. portable yarder-loader to be displayed by Howard-Cooperation Corp., at the Willamette Valley Logging Conference, Eugene, April 23-25. The yarder-loader is manufactured by Portland Crane & Tractor Co., 312 Weatherly Bldg., Portland, Ore., and distributed by Howard-Cooper Corp. in Oregon and Washington.

The machine has a 3-drum Berger hoist and hydraulic motors. When used as a log loader it can be set up within 10 minutes, or can be taken down for legal movement over highways in the same period. It will handle up to the average 3500-foot log without being guyed on a straight line. For logs over 3500 feet a special spar associated with the cab permits the use of swivel guy wires, permitting the boom to be revolved a full 360 degrees.

The yarder-loader can be placed in yarder operation within one hour by taking a 70-foot tree and rolling in on the top side of the heel boom and raising into position with the boom.

Shown herewith left to right are: J. S. PEIXOTTO, regional manager; HOWARD A. BELLOWS, vice-president regional sales; R. G. MAGUNSON, Portland Division manager; KARL A. DAHLSKY, manager of truck tires, for General Tire & Rubber Co., during a recent visit to the Northwest.

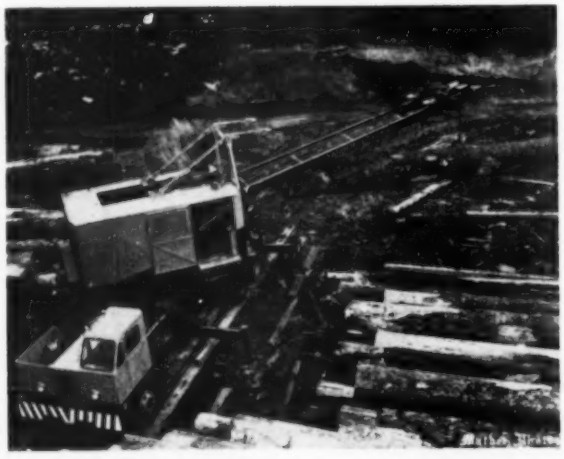
A. C. Distributors

The Garrett & Shafer Engineering Works is distributor for Allis-Chalmers motors, controls and *Texrope* drive equipment in 16 counties in western and central portions of Washington. The concern was founded in 1922 and is headed by E. P. Garrett.

Reduce Saw Prices

Substantial price reductions on its complete line of DO-101 chain saws have just been announced by Henry Disston & Sons, Inc., 113-year-old manufacturer of saws, tools, and special alloy steels. An across-the-board reduction of $50 has been applied to each saw in the DO-101 line.

Richard K. McConkey has been appointed assistant general manager of the Industrial Division of the Timken Roller Bearing Co., Canton, Ohio. He was formerly district manager of the Industrial Division at Moline, Ill.



New yarder-loader built by Portland Crane & Tractor Co. This is a 25-ton model with 12 ft radius boom.

New McCulloch Power Saw Sensation

McCulloch Model 7-55 (7 HP . . . 55 lbs.)
(Horsepower Rating on the Blade where it is needed.)
Phone, Write or Wire, or Better Yet Come In for a Demonstration

FOSTER POWER SAW CO.

Factory Distributor . . . Lane, Linn, Lincoln & Benton Counties, Oregon
COMPLETE CHAIN SAW TOOLS AND ACCESSORIES
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DOUGLAS FIR PRICES

1x8 #3 S2or4S KD	$ 65.00
2x4 #1 Dimension S4S KD	89.00
1x4 B&Btr VG Flooring KD	160-170
1x6 B&Btr Drop Siding KD	150-155
1x6 B&Btr S4S KD	160-165
1x8 B&Btr S4S KD	160-170
1x10 B&Btr S4S KD	175-185
1x12 B&Btr S4S KD	195
#1 TIMBERS AND PLANK	
3x12 6-20′	$ 76-81
3x12 22-24	79-84
3x12 26-32	84-89
4x4 6-20′	79-84
4x4 22-24	82-87
4x4 26-32	90-95
6x6 8-20′	77-81
6x6 23-30	84-89
6x6 32-40	98-102
8x8 8-20′	76-81
8x8 22-30	79-84
8x8 32-40	97-101
6x10, 8x10, 10x10, 12x12, 8-20′	76-81
6x10, 8x10, 10x10, 12x12, 22-30	79-84
6x10, 8x10, 10x10, 12x12, 32-40	96-100
Douglas Fir Cross Ties	60-65
#1 DIMENSION (GREEN)	
2x4 6-24′	70-75
2x6 6-24	69-74
2x8 6-24	68-73
2x12 6-24	67-72
#2&Btr BOARDS (GREEN)	
1x4 6-20′	58-63
1x8 6-20	65-70
1x12 6-20	70-75

WESTERN PINE PRICES

Following Delivered Prices, based on Past Sales, were reported to the WESTERN PINE ASSOCIATION by members during the period 3/2 to 3/14-53 inclusive. Both direct and wholesale sales are included and are based on specified items only. Two districts are given, one being the State of Illinois, outside of the Chicago Metropolitan district, and the other the State of Pennsylvania. Quotations follow:—

PONDEROSA PINE

Selects S2or4S	1x8″		5/4 RW	
	Illinois	Pa.	Illinois	Pa.
C Select RL	$253.00	$263.95	$270.11	$273.17
D Select RL	225.30	234.35	241.40	245.27
Shop S2S	No. 1		No. 2	
5/4	160.13	163.86	131.12	134.67
6/4	157.50	160.25	129.53	133.25
Commons S2or4S	No. 2		No. 3	
1x8″ RL	136.11		108.50	110.59
1x12″ RL	139.47	139.48	107.30	105.86
4/4 #4 Common S2or4S RW&L	85.75		90.75	

IDAHO WHITE PINE

Selects S2or 4S	1x8″	6/4 RW
Choice (C) RL	281.75 277.42	301.50
Quality (D) RL	244.75 244.70	283.50 280.50
Commons S2or4S Colonial (#1)		Sterling (#2)
1x8″ RL	169.75	156.75 158.32
1x12″ RL	197.75	162.50 163.03
4/4 Utility (#4) S2or4S RW&L		

SUGAR PINE

Selects S2or4S	4/4 RW	5/4 RW
D Select RL	257.00	
Shops S2S	No. 1	No. 2
5/4	169.00	133.00

Larch-Douglas Fir

#1 Dimension 2x4 RL	111.29
#1 Dimension 2x6 RL	114.50 111.71

SOUTHERN PINE PRICES

FOB Mill	BB	C	D
1x4 Std. VG Flg.	$210.00	$195.00	$163.00
1x4 Std FG Flg.	183.00	175.00	140.00
1x6 Std. FG Flg.	196.00	186.00	150.00
	No. 1	No. 2	No. 3
1x 6 Std Boards & S/L	143.00	91.00	75.00
1x 8 Std. Boards & S/L	143.00	93.00	82.00
1x10 Std. Boards & S/L	153.00	91.00	79.00
1x12 Std. Boards & S/L	195.00	99.00	77.00

No. 1 Dimension S4S

	12′	14′	16′	18′	20′
2x 4	$100.00	$100.00	$102.00	$109.00	$109.00
2x 6	98.00	98.00	100.00	110.00	110.00
2x 8	101.00	101.00	100.00	112.00	112.00
2x10	113.00	113.00	115.00	122.00	122.00
2x12	117.00	117.00	119.00	126.00	126.00

No. 2 Dimension S4S

2x 4	95.00	95.00	97.00	104.00	104.00
2x 6	90.00	92.00	90.00	105.00	105.00
2x 8	94.00	93.00	90.00	105.00	105.00
2x10	97.00	100.00	98.00	112.00	112.00
2x12	98.00	98.00	100.00	116.00	116.00

No. 3 Dimension S4S

2x 4	71.00	.....	.....	.....	.....
2x 6	71.00	.....	.....	.....	.....
2x 8	71.00	.....	.....	.....	.....
2x10	68.00	.....	.....	.....	.....
2x12	66.00	.....	.....	.....	.....

LOG PRICES

Columbia River. Demand is good for market logs in spite of unusually large log inventories.

Douglas Fir Peelers: No. 1 generally $110; No. 2 $100; No. 3 $80.

Douglas Fir sawlogs: No. 1 $65; No. 2 $52.50; No. 3 $42.50.

Hemlock: Peelable $57.50; No. 1 $52.50; No. 2 $42.50; No. 3 $40; some hemlock at $40 to $41 camp run.

White Fir: Same as hemlock or around $1 less.

Noble Fir: Peelers $65; sawlogs—No. 1 $60; No. 2 $42.50; No. 3 $40.

Cedar: Shingle $33.50 to $40; lumber $70 to $75.

Spruce: Select $85; No. 1 $60; No. 2 $45.00; No. 3 $42.50.

Douglas Fir Wood Logs: $12 to $20.

VANCOUVER LOG MARKET

(By C. D. Schultz & Co., Ltd.)

FIR

Fir—Open market log stocks at 12 month low. Price range for standards is unchanged at $40.00 to $50.00 for #3's, $50.00 to $60.00 for #2's and $60.00 to $70.00 for #1's. Peelers are firm, selling at $60.00 to $70.00 for #3's, $70.00 to $80.00 for #2's and $80.00 to $90.00 for #1's in sorted booms.

CEDAR

Cedar—Log stocks at seasonal low. Standard log price range is now at $30.00 to $40.00 for #3's, $40.00 to $50.00 for #2's, and $60.00 to $70.00 for #1's. Lumber cedar is still selling at $55.00 to $65.00 for #2's and $65.00 to $75.00 for #1's. Demand for sorted Pee Wee and Tie Cedar is still strong at $30.00 to $37.50.

HEMLOCK AND BALSAM

Hemlock and Balsam—Log stocks continue to decrease despite a slow market. Hemlock price range is now $30.00 to $40.00 for #3's, $40.00 to $50.00 for #2's and $45.00 to $55.00 for #1's.

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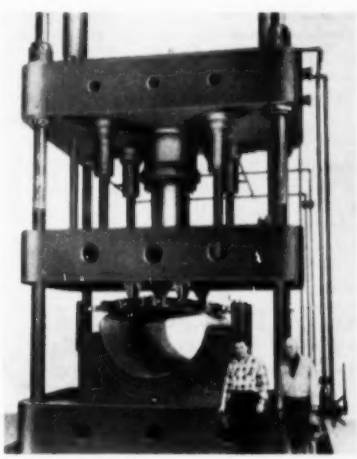

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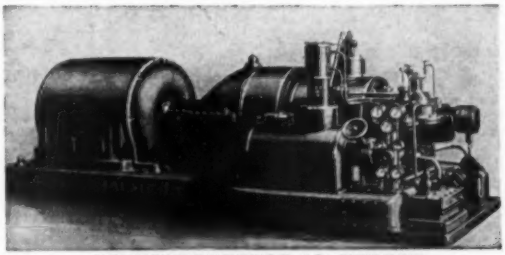

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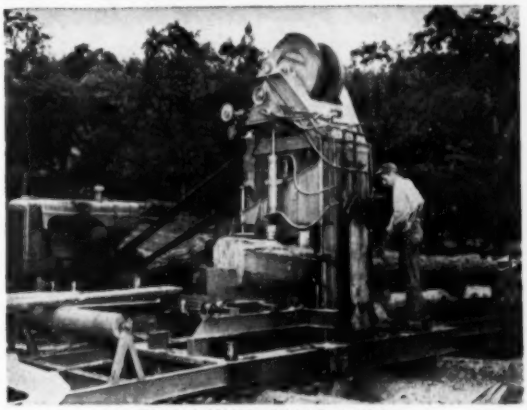

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CATS: 2) D-4 Tractors—7U and 7J

CRANE: Link Belt Model LS-85 Diesel Crane with 45 ft. boom and Dragline

LUMBER EQUIP.: Yates American V-60 B.B. Resaw; Yates American A-20 B.B. Planer Moulder; Cunningham 62" carriage & Set Works; Cunningham 48" Edger (4 saws); Cunningham 22 ft. 2-saw Trimmer; Cox Steam Feeder, 42 ft. shot-gun type; 6x8 Steam Nigger W Bar and Log Loader; (2) Sets Independent Skid Transfers; Standard 60" B.B. Harvey Hog

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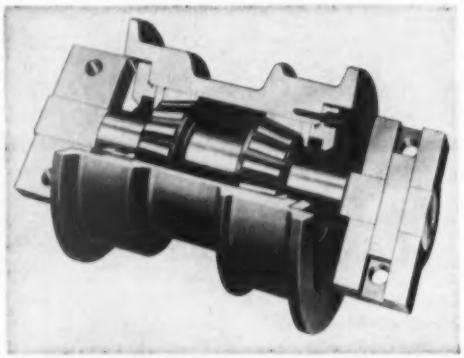

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TRACTOR ROLLER ASSEMBLY

For D-8, D-7 and TD-18 Tractors

- D & M roller has positive seal on shaft-keeps dirt and moisture out of bearings and keeps grease in.
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Complete Saw Mill (35M capacity),

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1—Headrig complete
1—Heavy duty carriage, 20 ft., 3 block, belt set works, worm gear, 60# rail, Drums & extra large chives (built new 2 yrs. ago, run about 12 months)
1—Steam nigger
1—12x14 Willetmette Steam engine
2—Upright Boilers (one 6' diam.; one 7½' diam.)
1—Trim saw
1—Slab conveyor 1x6 chain, metal end stand driving gear
1—3-saw 4x36 Stub edger

All equipment has necessary gears, belts, pulleys, etc. Terms to suit may be arranged.

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GREY MARINE DIESEL ENGINE, model 671, completely reconditioned.
PLANER-MATCHER, Yates 91, 6x20, pineapple roll feed table, good working condition.
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PLANERS

1—404 Woods 6 x 10 matcher, 6 knife, rd. heads, jointers, feed table, motor and starter.
1—Yates P-10 Planer 4 knife round heads, 6" x 20"
1—American 77-A 8 knife, round head, double profiles ball bearing top, bottom & side heads, 6" x 15" capacity
1—Tower 2 saw 8-ft to 16-ft end trimmer.

EDGERS

1—8"x48" Port. 5-saw stub edger with ballbrg arbor, saws, arranged for either direct mtr or belt drive, first class.
1—4" x 30" Portland, table type.

CARRIAGES—FEEDS

1—66" 3-block Portland, air dogs, Trout setworks, anti-friction wheels.
3—Sumner 72" screw headlocks with set shaft and knees, excellent condition.
1—Portland 4-block, 60" opening, with trailer.
1—new Farquhar portable 20' mill, real bargain.
1—Soule Speed-E twin feed with drum.
1—7" x 8" Brownlee twin, direct with drum.
1—Shotgun 12" x 42', Western (new).

MOTORS (Partial list)

1—125 HP 900 RPM G-E Slip ring
1—250 HP 720 RPM G-E Sq. cg.
1—200 HP 600 RPM G-E Sq. cg.
1—200 HP 720 RPM Lincoln Sq. cg.
1—150 HP 1800 RPM G-E Sq. cg.
1—100 HP 1800 RPM G-E Sq. cg.
1—100 HP 900 RPM G-E Sq. cg.
1— 50 HP 900 RPM G-E Sq. cg.
1— 10 HP 350 RPM Falk Mot-reducer
1— 5 HP 180 RPM Sterling Mot-reducer
1— 3 HP 100 RPM Westinghouse Mot-reducer
1— 3 HP 68 RPM U. S. Mot-reducer
1— 3 HP 30 RPM Westinghouse Mot-reducer

MISCELLANEOUS

1—1946 Gerlinger 42" x 48" Carrier, rebuilt
1—#38 Diamond roller brg. hog
1—#65 Diamond Hog, rebuilt, new knives
1—1500 GPM Dayton pump for log washer
1—250-amp P & H portable welder on rubber
Air cylinders - valves - steam cylinders - Chains - sprockets - gears.

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Berlin 108 Moulder, 6x12, knives, hood.
pipe.
Autocar 2 axle truck crane, 4,000# lift.
15 KW, 1500 RPM, DC Generator.
1000 GPM Gould pump, 1800 RPM, 280' hd.
4' dia. Sheeps Foot, Universal type.
Barco Gas hammer with all tools.
2—24" Electric blowers, D.C. MTRS.

PACIFIC MACHINERY COMPANY
412 River St., Seattle 8, Wash.

USED EQUIPMENT

EDGERS

1—new Wheland 3½" x 34 Roller brg. edger
1—used Wheland 4 x 44 4-saw Table edger
1—used Heaps 6 x 30 stub edger
1—used P.I. Works 6 x 48 stub edger
1—used 8 x 54 Sumner R.H. roller brg. stub edger
1—used 10 x 60" Allis LH roller brg., stub edger

COMPRESSORS, NEW AND USED

1—677 cu. ft. Ingersol-Rand
1—used 194 cu. ft. Worthington 40 HP motor
1—used 145 cu. ft. Hor. Ingersol-Rand
1—new 125 cu. ft. 2-stage Worthington 25 HP motor
Complete stock of smaller new Worthington compressors

PUMPS—NEW STEAM PUMPS

New Worthington 1" to 3" Centrifugal pumps, belts and motor drive
1—Worthington 5¼ x 3½ x 5 and 6" x 4" x 6" Duplex
1—Worthington 7½ x 5 x 6 Duplex boiler feed
Used pumps, all sizes to 10" x 6" x 10" Duplex and Centrifugal to 10"

HOISTS

1—American 6" x 12" dbl. cyl. sgl. drum rev. throttle, sgl. geared, 7 x 4 pinion, 28 x 4 gear drum
1—new Elect. Hoist, dbl. drum, 22" x 32", ¾ or ⅞ line, speed 40 FPM line pull 18,000 lbs. 25 HP direct current, 230 volt, all enclosed—unusual bargain
1—American 6" x 12" dbl. cyl. sgl. drum rev. throttle, sgl. geared 16 x 20 drum
1—Hyde 6 x 8 cyl. reverse throttle, rebuilt
1—new #40 American sgl. drum hoist, motor drive, 10 HP cap. 2000 lbs. at 100 FPM
1—used Link Belt 2-ton crane, 27 ft. 4" span—motor bridge
1—5-ton Snl. friction Drum Hoist, 10 HP 1200 GE Bb motor

HOGS AND CHIPPERS

1—42" Brinkley Chipper, babbitt brg. 4 knife, 9 x 11 spout
1—used Diamond #25 Hog
1—used Diamond #45 hog
1—used 15CF M&M chipper, 46" x 20" opening, cap. 12,000# per hr.
1—new Diamond #25 hog
1—new Diamond #35 hog
1—new Diamond #45 hog
1—Williams #4XA Hammer Hog, 20 x 44 opening cap. 10 tons per hr.
1—used Phoenix #2V hog, 36 rotor, 12 x 16 opening
1—72" chipper, belt drive, 3 knife

CARRIAGES AND HEAD RIGS

1—9 ft. Union band mill, roller brg. RH, new Marten strain
1—7 ft. Clark RH Band Mill, roller brg. motorized guide lift and strain
1—54" Berlin Pony Band Mill, 7" blades
1—Steel Husk RH Roller brg
1—3-block 60" Carriage, elect. set, air dogs, steel frame, roller brg. trucks, air flippers
1—used Sumner Iron Works 3-block R&P 36" opening tapers on knees without tapers opening 39", #3 Elect. Set, Elect. Dogs, steel frame
1—3-block 46" Phoenix headblocks, hand set, trucks and track
1—used Carriage, 3 54" screw blocks, Power Set Works, 5 HP motor, 6 sets trucks, 10" wheels, 60' V and flat track
1—3-block 60" Carriage, Dbl. I-Beam blocks, Power Set, Taper knees, 6 trucks, 12" wheels Timken bearings
1—Allis 3-block 72" Carriage, #3 Trout Set, Taper Knees
1—Sumner 3-block 60" Carriage, Sumner Set, Taper Knees
1—used #4 Trout Set Works for Screw blocks
1—used Sumner Power Set Works for Screw blocks

MILL EQUIPMENT

1—10" and 12" x 5' full oscillating nigger
1—2-arm log stop and loader, 36" arm, 4-15/16 shaft 12x16 cyl.
1—3-arm log stop and loader, 5-15/16 shaft, 18"x 24" cyl.
1—3-arm log stop and loader, 42" arms, 16x20 cyl.
190 ft. 1¼ x 6 x 2 used conveyor chain
300 ft. 1¼ x 6 x 2 used conveyor chain
300 ft. new 1 x 6 x 1½ conveyor chain
200 ft. new ¾ x 6 x 1½ conveyor chain
1—new Wheland #36 portable mill 36" headblocks
1—Sumner motor driven shingle machine
1—7" x 44" Multnomah Steam Drag Stew
1—Sumner 8-saw lath bolter, 22" saws
4—16" x 24" Air Carriage Bumpers
1—12 x 16 Dbl. Acting lift cyl.
1—12 x 20 Dbl. Acting lift cyl.
1—18 x 24 Dbl. Acting lift cyl.
1—18 x 36 Dbl. Acting lift cyl.
1—24" x 36" Dbl. acting lift cyl.
Smaller steam and air cylinders in stock
1—Ross #11 42" Carrier

ENGINES AND BOILERS

1—Caterpillar Diesel #13000 rebuilt
1—80 HP 60" x 16' gas engine
1—4-cyl. 60 HP Waukeshau gas engine
1—11 x 14 center crank Atlas, 66x12 pulley 3" steam
1—H S and G 15 x 20 side crank engine RH
1—Ames 11 x 2 center crank, 48 x 12 pulley
1—100 HP open bottom fire box boiler, 195#, ASME code

STEAM FEEDS

1—4½ x 5 twin feed
1—used 5 x 6 twin feed (SpeeD)
1—new 5 x 6 twin feed (SpeeD)
1—6 x 7 Twin feed
1—12" x 36" shotgun feed
1—16 x 18 Allis twin feed
1—7 x 8 twin feed
1—8 x 10 twin feed
1—12 16 twin feed direct 36 x 44 drum
1—10"x42' shot gun

RESAWS

1—new Trojan Cir. Resaw, cap. 14" x 17"
1—Fay and Egan 30" Cir. Resaw, tilt. rolls, anti-friction arbor
1—42" Cordesman band resaw, 8" opening, 25 HP motor
1—54" LH Mershon band resaw, tilt. rolls roller brg., quick set
1—64" Yates V-50 Band Resaw, 8" blades, Quick Set
1—Mershon 84" resaw, anti-friction brg.
1—Mershon 84" LH resaw, babbitt brg.
1—American #4 40" band scroll resaw, 5" blades

PLANERS, SURFACERS, MOULDERS

1—Woods #608 6x24 8-knife Planer and Matcher
1—Woods #10 12x30 Planer and Matcher
1—Frank and Co. 6x24 Sq. Head Planer
1—Berlin #95 6x30 6-knife matcher with ripper
1—American #22 6x30 4-side ballbearing planer
1—H&B #110 8x15 6-knife matcher
1—XL 2x4 BB motor drive Moulder
1—H&B 8" 4-side Moulder Sq. Heads
1—American 7" 4-side Moulder
1—American #26 12" Sq. Head Moulder
1—S. A. Woods #107 12"x6" Inside Moulder
1—S. A. Woods 702B 6x15 5-head Moulder
1—S. A. Woods 108 10" 4-side Moulder 4-knife heads
1—Fay & Egan #275 8"x24" 4-knife planer
2—Steel frame planer feed tables

RIP SAWS

1—American #2 42" Band Rip 12" opening
1—#2 American self-feed Cir. Rip Saw
1—American #15 straight line Rip 15 HP

KNIFE GRINDERS

1—used Stetson Ross Sidehead grinder
1—new #101A Sidehead grinder, motor driven
1—new #102A sidehead grinder and profile grinder, motor drive
1—used American #5 sidehead grinder with profile jointer
1—New Michigan 30" motor driven knife grinder
1—new Dependable #99A5 36" motor drive, fully automatic

SAW GRINDERS

1—8" LH band saw grinder
1—Rogers #6 8" band saw grinder
1—Covel #66 8" RH band saw grinder
1—10" RH motor driven bandsaw grinder
1—Covel #90 LH band saw grinder
1—Covel #115 RH 10" band saw grinder
1—Covel #130 14" RH
1—Covel #150 RH 16" BB arbor—motor drive
1—Covel #118 16" RH band saw grinder
1—Covel #724 36" Aut. Cir. Saw Grinder, motor drive
1—Covel #748 Aut. 48" Rip and CO Grinder
1—Covel #768 68" Aut. Cir. Saw Grinder
1—Covel #120C Hand Gummer Cap. 72"
1—Covel #46 Large 72" Hand Gummer
1—new Acme 60" Hand Gummer, motor drive
1—Covel Blackmer 72" Gummer, motor drive
1—Automatic Cir. Saw Grinder cap. 44"
1—Covel #109 16" movable roll stretcher
1—Covel #810 10" movable roll stretcher
Anvils and Leveling blocks—all sizes

MACHINE SHOP

1—used Nebel 18" x 12' Quick Change MD Lathe
1—new Carroll-Jamieson 16"x10' Geared head lathe
1—used American 18"x12' Quick Change lathe
1—used Cincinnati 30" motorized shaper
1—used American 30"x30"x10 Planer
1—used #3 Cincinnati Universal Mill, motorized
1—used Barnes 4'11" column Radial Drill
1—used Kalamazoo 8x16 Band Saw
1—used Atkins 8x8 Quick-Cut Hack Saw
1—used #2 Mitts and Merrill Keyseater
New #502 Pipemaster Threading Machine

Agents for WHELAND—Band Mills, Circular Sawmills, Edgers, Trimmers, Carriages. DIAMOND IRON WORKS—Fuel Hogs. WORTHINGTON ONAN—Generators. EIMCO—Compressor Pumps. SCHURMAN MACHINE WORKS—Edgers, Hoists. ALLIS-CHALMERS—Motors, Controls, Drives. ARMSTRONG—Filing room machinery. IRVINGTON—Cutoffs saws. ONAN—Electric Plants. EIMCO—Air Motors.

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1—No. 505 American 8x4" Moulder.
1—4" Hayes 2-head Door Sticker, plain brg.
1—No. 114 Berlin 15x6" Inside Moulder.
1—American "Happy Thought" #24 24x6" Planer and Matcher.
1—No. 44 Berlin 30x6", 4-knife square.
2—Newman Profile Attachments, new.
1—#55 Newman Feed Table, new.
1—12" Vonnegut All-Electric Moulder.

BAND AND CIRCULAR SAW MILLS

1—54" Prescott 3-block Carriage.
4—60" Screw Blocks with set and trucks.
1—American Porta-Mill, new.
1—No. 1 American Saw Mill, new.
3—No. 4 Star Saw Mills, new.

BAND RESAWS - RIP SAWS - SHIP SAWS

1—40" American Tilting Ship Saw.
1—42" Turner Twin Band Resaw, 30 HP, new.
1—50" Fay & Egan Band Resaw, rebuilt.
1—54" Mershon Band Resaw.
1—84" Yates V-84 Ball Bearing Vertical Band Resaw, rebuilt.

SAW MILL EQUIPMENT

1—4x30" Miner Edger, new.
2—4x32" Star Edgers, new.
1—No. 106 Tower 42" Edger, new.
1—6x44" Prescott Edger.
1—No. 3 American Top Saw Rig.
1—No. 4 Star Top Saw Rig, new.
1—Sumner Log Stop with 6x12" cylinder.
1—11" x 38' Phoenix Shotgun Feed.

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1—No. 125 Oliver Single End Tenoner, new.
1—No. 126-B Jenkins 3-in-1 Machine, new.
1—WA-85 Onsrud Automatic Shaper.
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1—No. 100 Bell Front & Back Post Boring Machine, new.
1—6"x24" Fay & Egan Single Surfacer.
1—No. 600 Newman 24" Single Surfacer, new.
2—Portable Hydraulic Scissors Lifts, 3500# capacity.

IMMEDIATE SHIPMENT NEW PLANERS & MATCHERS

#512 NEWMAN 8x16" Planer & Matcher, 325 FPM, 8-knife.
#500 NEWMAN 6x14" Planer & Matcher, 200 FPM, 6-knife.
#8-B NEWMAN 4x14" Planer, Matcher and Moulder, 75 FPM, 4-knife.

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75 hp 900 rpm G.E.
50 hp 600 rpm G.E.
50 hp 1200 rpm G.E.
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Three 250 KVA Allis Chalmers outdoor type transformers. 13800 high volts, 460 low volts. $2500 F.O.B. Spokane. All in excellent condition.

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FOR SALE:

One Carriage—no setworks—5 Headblocks complete with knees, screws and brass nuts 3 Tapers. 8 Sets extra good steel carriage trucks, two flat and 1 V in each set. 125 feet rail mounted on ½x10 plate. 16 Journal bearings. 2-15/16" lay shaft with adjustable couplings. Price: $4500.00 as is, where is. For further information, contact Willamette Valley Lumber Co., Dallas, Oregon. Purchasing Department.

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

FOR SALE:

One Stetson-Ross 17-A 15"x6" 12 Knife Planer & Matcher. 3/60/440V. Seven extra pairs side heads #1 Taper 9" Cutting circle. 80 HP on top cylinder 40 HP on bottom, 25 HP on outside, 20 HP on inside. Variable speed feed 20-15-10 HP. This machine is in excellent condition. For further information wire or write Purchasing Department, Willamette Valley Lumber Co., Dallas, Oregon.

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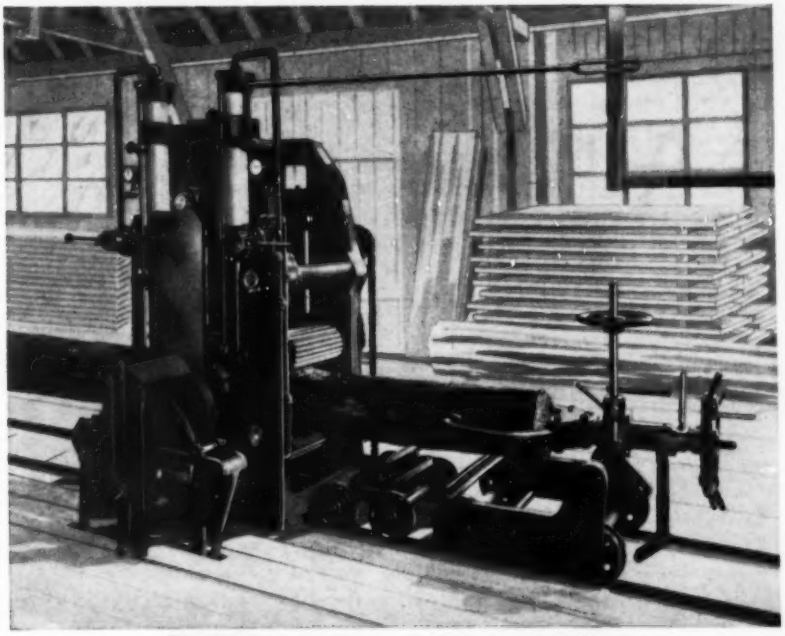

We now offer a SASH GANG SAWMILL of ingenious design. This SAWMILL is designed to saw LOGS and CANTS of both HARDWOOD and SOFTWOOD. It is the most accurate and fastest method of turning logs into lumber of any dimension. Logs of any length may be put through this SAWMILL due to the design of carriage. In short log operation (BOLTS) additional FEED ROLLERS are added to replace carriage.

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This SAWMILL is truly a masterpiece of workmanship and design. Manufactured by Machine-fabrik Bernard Braun, Schwarzwald (Black Forest), Germany—a company with 90 years' experience in designing and manufacturing SASH GANG SAWMILLS.

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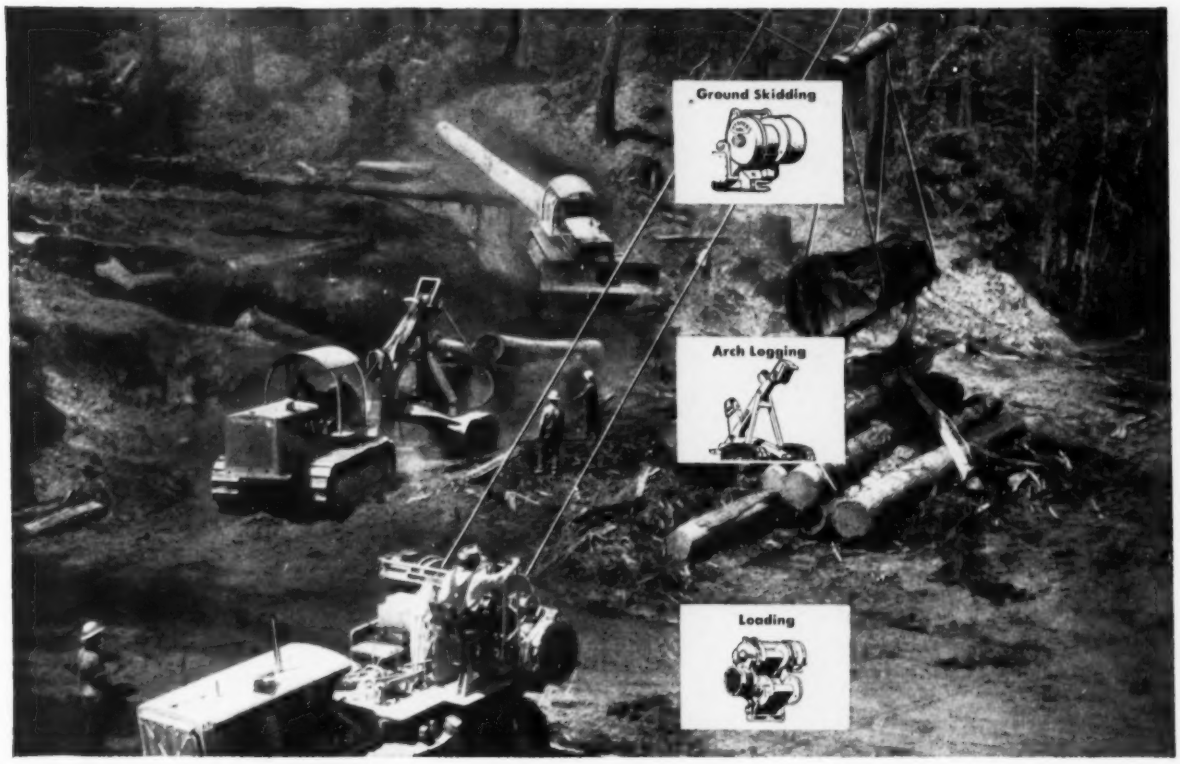

...piles up profits at the landing!

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For profitable, uninterrupted, quick log handling on *any* logging show, HYSTER HAS THE RIGHT EQUIPMENT FOR THE JOB. Hyster Winches, Arches and Yarders are specifically designed for balanced, matched mounting on Caterpillar-built Tractors. See your Caterpillar-Hyster dealer, or write to:

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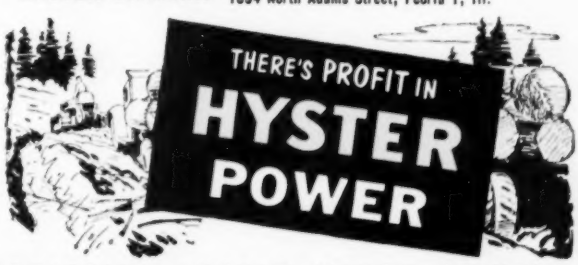

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Speed your WOODS operation

with this "one-man maintenance gang"

One man, with dozer-equipped D Tournapull, is a complete "maintenance crew" for dirtmoving around your logging show. This job-proved rig travels on or off road at speeds to 28 m.p.h. It cuts grades accurately, hauls anywhere, and spreads in controlled layers. You can self-load up to 5 yards in most scraper dirt in less than a minute. For larger volume dirtmoving, 2 "D's", with dozer blades, can push-load each other . . . heap 7 yards in 30 to 40 seconds. On dozing assignments, Tournapull's blade will handle about 1¼ yards. High speed on rubber makes long scraper hauls economical. Full 90° turns and short 12'9" turn radius are especially helpful in woods.

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The 7-yd. (9-ton) "D" handles all these jobs:

- Builds and maintains skid and truck haul roads. Loads, hauls from roadside borrow pits for graveling.
- Levels for building and camp sites, cleans out landings, cuts fire breaks.
- Cuts drainage ditches, grades shoulders, "daylights" curves, handles widely-scattered dozing tasks.
- Hauls in supplies. Carries loads over rough terrain.
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